

JANE SWIFT

Acting Governor

## COMMONWEALTH OF MASSACHUSETTS EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS

### DEPARTMENT OF ENVIRONMENTAL PROTECTION

ONE WINTER STREET, BOSTON, MA 02108 617-292-5500

BOB DURAND Secretary

LAUREN A. LISS Commissioner

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This information is available in alternate format by calling our ADA Coordinator at (617) 574-6872.

DEP on the World Wide Web: http://www.state.ma.us/dep

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ONE WINTER STREET, BOSTON, MA 02108 617-292-5500

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LAUREN A. LISS Commissioner

## PART 1: SOURCE REGISTRATION INSTRUCTIONS FOR THE WHOLE PACKAGE

#### INTRODUCTION

The Source Registration supplies the Department of Environmental Protection (DEP) with valuable information on the types and quantities of airborne contaminants from individual facilities across the state. It allows DEP to characterize emissions to the air, to monitor effectiveness of control programs and to meet regulatory requirements.

This data is entered into DEP's electronic Stationary Source Emission and Inventory System (SSEIS). Some of the data from SSEIS is also submitted to the Federal EPA "AIRS" system and is displayed on EPA's web site.

Please make every effort to ensure your information is accurate.

### REPORTING PACKAGE CONTENTS

The entire reporting package contains:

✓ Source Registrations Reporting Instructions

AND FOR FACILITIES THAT HAVE SUBMITTED SOURCE REGISTRATIONS PREVIOUSLY:

✓ The "Side-by-Side" Report: a computer printout of the information from your last source registration.

### **Source Registration Reporting Instructions**

The Source Registration Reporting Instructions has four parts:

- ✓ PART 1: GENERAL INSTRUCTIONS for completing the source registration
- ✓ PART 2: A blank set of the 9 BWP AQ Source Registration Forms with instructions for each form
- ✓ PART 3: INSTRUCTIONS FOR THE "SIDE-BY-SIDE" COMPUTER PRINTOUT
- ✓ APPENDICES
  - APPENDIX A: DEFINITIONS
  - APPENDIX B: ACRONYMS
  - APPENDIX C: SAMPLE CALCULATIONS
  - APPENDIX D: AIR POLLUTION CONTROL EQUIPMENT CODES
  - APPENDIX E: MACT STANDARDS AND COMPLIANCE DATES
  - APPENDIX F: DEP REGIONAL OFFICES

#### **AUTHORITY**

The regulations requiring reporting are 310 CMR 7.12 and 7.02 (11). In addition some DEP permits or plan approvals also require the submission of source registrations, at the discretion of the regional office.

### REPORTING THRESHOLDS

All facilities that emit or have the potential to emit air contaminants above given thresholds are required to submit source registrations to DEP.

Facilities are required to submit a source registration annually or triennially depending upon the quantity of air contaminants they emit or have the potential to emit.

### General Rules Of Thumb

- ✓ A facility that holds a plan approval pursuant to 310 CMR 7.02 may be required to submit annual or triennial source registrations. The plan approval may specify the reporting frequency.
- ✓ Some facilities are required to submit source registrations even if they that are not required to have plan approvals pursuant to 310 CMR 7.02. It is possible for a facility to exceed the reporting thresholds without exceeding the thresholds for a plan approval or operating permit.
- ✓ If your facility received a source registration package in the mail, it means that a source registration is due from your facility. The package must be completed and returned to DEP by the due date.
- Source Registration packages are sent out as a courtesy. If a source registration is due from a facility, that facility has an obligation to report even if it has not received a source registration package in the mail: Annual reporters must report each year. Reports from triennial filers are due this year if the facility has not reported in the past two years.

### **Threshold For Annual Reporting**

A facility is required to submit annual source registrations if it meets **ANY** of the conditions listed below:

✓ The facility's ACTUAL emissions are equal to or greater than the thresholds for one or more of the air contaminants listed below:

Pollutant	Threshold
Nitrogen Oxides (NO <sub>X</sub> )	25 tons per year
Volatile Organic Compounds (VOC)	25 tons per year
Particulate Matter (PM)	100 tons per year
Sulfur Dioxide (SO <sub>2)</sub>	100 tons per year
PM10	100 tons per year
PM2.5	100 tons per year
Carbon Monoxide (CO)	100 tons per year
Ammonia (NH3)	100 tons per year
Any other Clean Air Act Chemical (CAA Chemical)	100 tons per year

- ✓ The facility's POTENTIAL Emissions ① equal to or greater than 10 tons per year of any CAA Hazardous Air Pollutant (HAP) ② chemical listed on the BWP CAA-HAP form
- ✓ The facility's POTENTIAL Emissions ⊕ equal to or greater than 25 tons per year of any combination of CAA HAP listed in the BWP CAA-HAP form
- ✓ The facility has either an Air Operating Permit pursuant to 310 CMR Appendix C or an air operating permit plan application on file with the department
- ✓ The facility has a plan approval or certification issued pursuant to 310 CMR 7.02 specifying annual source registrations, **including, but not limited to,** facilities that have:
  - An RES (Emission Restriction) pursuant to 310 CMR 7.02(9)
  - A 25%/50% Certification at the 50% level pursuant to 310 CMR 7.02(11)
- ✓ The facility is required by DEP to report annually (pursuant to 310 CMR 7.12 . For example some facilities subject to National Emission Standard for Hazardous Air Pollutants (NESHAPs) under 40 CFR 61 or Maximum Achievable Control Technology (MACT) requirements pursuant to (40 CFR part 63) are required to submit annual source registrations.

### Threshold for Triennial Reporting

A facility is required to submit a source registration package once every three years IF the facility

✓ Is not required to report annually

### **AND** IF the facility **EITHER**

✓ Exceeds ANY of the emission thresholds in the table below

Contaminant	Threshold
PM	Potential emissions ①> 2 tons per year
$SO_2$	Potential emissions ① > 2.5 tons per year

Organic Compounds (VOC) (Volatile Organic Compounds (VOC) (V	Potential emissions ① > 10 tons per year
$NO_X$	Potential emissions ① > 4.4 tons per year

#### OR

✓ Is a waste incinerator capable of reducing more than 50 pounds of waste per hour or a hazardous waste incinerator.

### WHEN THE SOURCE REGISTRATION IS DUE

Source Registration information is due April 15, 2003.

#### **Extensions**

If it is not possible to complete and return the forms within the required 60-day period, you may submit a written request to the address below for up to a 30 day-day extension, subject to approval by the Department.

### WHERE TO SUBMIT THE SOURCE REGISTRATION

Department of Environmental Protection

Bureau of Waste Prevention

**Attention: Robert Boisselle** 

One Winter St, 8<sup>th</sup> floor

Boston, Ma 02108

### WHICH FORMS DO FIRST TIME REPORTERS SUBMIT?

First Time Reporters should submit at least one version of each BWP AQ form.

NOTE: If the facility does not engage in the operation covered by the form (for example, most facilities do not have waste incinerators) or is below the reporting threshold for a contaminant or operation, then write NA (not applicable) on the form. In this way DEP will know that you did not inadvertently forget to submit the form.

The instructions for each BWP AQ form explain when the form is applicable.

How many *versions* of each form must be submitted?

CAUTION: More than one version is required of certain BWP AQ forms. Consult the instructions for the individual form for the details on how many forms are required.

### WHICH FORMS DO REPEAT REPORTERS SUBMIT?

Facilities that have submitted previous source registrations must submit:

- ✓ The Side-by-Side Report with corrections and updated information for the calendar year being reported noted in the appropriate places
- ✓ A completed BWP AQ CAA form
- ✓ Applicable BWP AQ form(s) for:

Equipment installed, or new organic compounds used, or a change in fuel type (e.g., from oil to gas or coal) since your last source registration that is subject to a regulatory requirement in 310 CMR 7.03, 7.18, or 7.02 or for which a plan approval is required.

**CAUTION:** A plan approval may be required for such a change, contact your regional office if you did not obtain one and are unsure whether or not you need one. The address and phone number of each regional office, and the towns assigned to each office can be found in Appendix F.

### "INSIGNIFICANT ACTIVITIES" AND EMISSIONS

Emissions of air contaminants from certain activities that do not directly relate to the production of the facility's product (e.g., general facility and grounds maintenance or administrative or office activities) do NOT have to be reported to DEP on the source registration. Insignificant Activities are listed in Appendix A: Definitions.

### DATA AND MATERIALS USEFUL FOR REPORTING

TIP: The following data and material will make it easier to complete your source registration:

- ✓ Any permits or plan approval letters issued by DEP
- ✓ Copies of any permit or plan approval applications you submitted to DEP
- ✓ Regulatory standards that apply to the operations at your facility
- ✓ Previous year's source registration
- ✓ Data on the quantity of fuel, formulations, or other raw material you used in each emission unit ⊕ during the calendar year being reported
- ✓ Data on the hours of operation of each emission unit during the calendar year being reported.



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LAUREN A. LISS Commissioner

## PART 2: BWP AQ SOURCE REGISTRATION FORMS AND INSTRUCTIONS

### Section 2.1: BWP AQ Source Registration Forms Summary

THE 9 BWP AQ FORMS

There are 9 BWP AQ source registration forms.

BWP AQ AP-SR Source Registration/ Emission Statement This form provides basic identifying information about the facility.

The form must be submitted by:

✓ All facilities submitting their FIRST source registration: One form covers the entire facility.

Repeat Reporters are not required to submit this form.

BWP AQ CAA-HAPS List of Chemicals for Source Registration This form provides data about certain emissions Clean Air Act "Hazardous Air Pollutants" (HAPS) ① during the calendar year being reported

The form must be submitted by:

✓ ALL facilities submitting source registrations: One form covers the entire facility.

**BWP AQ AP-1** 

This form is for combustion equipment. It characterizes equipment, processes and associated air pollution emissions during the calendar year being reported from combustion units (boilers and internal combustion engines), but not waste incinerators and their auxiliary boilers, or air pollution control equipment such as flares or afterburners.

The form must to be submitted by:

- ✓ All facilities submitting their FIRST source registration: One form is required for each combustion unit that is larger than the thresholds for combustion units. Write NA on the form if you are below the threshold.
- ✓ Repeat reporters that installed a new combustion unit subject to a regulatory requirement or the requirement to obtain a plan approval or that changed the type of fuel they used since their last source registration.

This information is available in alternate format by calling our ADA Coordinator at (617) 574-6872.

### BWP AQ AP-2 Emission Unit – Process Equipment

This form is for non-combustion related process equipment. It characterizes equipment, processes, and associated air pollution emissions during the calendar year being reported from non-combustion related production processes.

The form must to be submitted by:

- ✓ All facilities submitting their FIRST source registration: One form is required for each process that exceeds the reporting threshold. Write NA on the form if you are below the threshold.
- ✓ **Repeat reporters that installed a new process equipment** subject to a regulatory requirement or the requirement to obtain a plan approval since their last source registration.

### BWP AQ AP-3 Emission Unit – Incinerator

This form is for incinerators that are capable of reducing at least 50 pounds of waste per hour. It characterizes the equipment, processes, and associated air pollution emissions during the calendar year being reported from the incineration of waste *such as solid waste, municipal waste, medical waste, sludge, etc.* 

The form must be submitted by:

- ✓ All facilities submitting their FIRST source registration: One form is required for each incinerator that exceeds the reporting threshold. Write NA on the form if you are below the threshold.
- ✓ **Repeat reporters that installed a new incinerator** subject to a regulatory requirement or the requirement to obtain a plan approval since their last source registration.

### BWP AQ AP-4 Emission Unit – Organic Material Storage

This form is for containers used to store organic material (fuel oil or solvents). It characterizes the container and the organic material stored or transferred during the calendar year being reported. The form must be submitted by:

- ✓ All facilities submitting their FIRST source registration: One form is required for each container with a capacity greater than 500 gallons. Write NA on the form if you do not have any organic material storage containers that are larger than 500 gallons.
- ✓ Repeat reporters that installed a new organic material storage container with a capacity greater than 500 gallons.

### BWP AQ AP-5 Organic Compound Usage

This form is for organic material ① used in each "Process Equipment Emission Unit", for which a BWP AQ AP-2 was completed. It characterizes the material and the Volatile Organic Carbon (VOC) ①, Halogenated Organic Carbon ① (HOC), and Hydrocarbon ① (HYC) emissions that result from its use during the calendar year being reported.

The form must be submitted by:

- ✓ All facilities submitting their FIRST source registration: One form is required for EACH formulation ① used in each Emission Unit for which an AP-2 equipment, or each chemical used to make a formulation or manufacture another chemical. Write NA on the form if you do not report VOCs, HOCs, or HYCs on a BWP AQ AP-2.
- ✓ **Repeat reporters** using a previously unreported formulation ① or organic material.

### BWP AQ AP-6 Solvent Data Registration Form

This form summarizes facility-wide emissions of VOCs, HOCs, and HYCs from non-combustion related processes at the facility for the calendar year being reported.

The form must be submitted by:

- ✓ All facilities submitting their FIRST source registration: One form is required for the entire facility. Write NA on the form if you do not report VOCs, HOCs, or HYCs on a BWP AQ AP-2.
- ✓ **Repeat reporters** that are reporting VOC, HOC, or HYC emissions for the first time.

### BWP AQ ES Typical Ozone Day

This form characterizes average daily VOC and  $NO_X$  emissions for the 153 day Ozone season between May 1 and September  $30^{th}$  of the calendar year being reported for each emission unit at the facility

The form must be submitted by:

- ✓ All facilities submitting their FIRST source registration: One form is required for each BWP AQ AP-1,2 or 3, on which you reported NOX or VOC emissions. Write NA on the form if you do not have any NO<sub>X</sub> or VOC emissions.
- ✓ **Repeat reporters** that submitted a BWP AQ AP-1 or AP-2 on which you reported VOC or NO<sub>x</sub> emissions.



### JANE SWIFT

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BOB DURAND Secretary

LAUREN A. LISS Commissioner

### Section 2.2: BWP AQ AP-SR Source Registration/Emission Statement Instructions

**PURPOSE** This form provides basic descriptive information about the facility.

WHO MUST FILE THIS FORM

This form must be completed by each facility submitting its FIRST Source Registration.

HOW MANY VERSIONS OF THIS FORM ARE REQUIRED? Submit one form for the whole facility.

**NOTE:** If your facility has submitted a source registration in the past, you do NOT need to complete this form.

### 1. FACILITY

**Name** The name of the facility or plant that is reporting.

The name must uniquely identify the facility. If the parent corporation operates more than one

facility, the corporate name alone is insufficient.

**Street** Street address for the facility (not mailing or corporate address, if different)

City Town or City name

Use the "official" town name as opposed to the village or section name.

**State** State of the facility (not state of the corporation, if different)

**Zip Code** Facility zip code (not corporate zip code, if different)

This information is available in alternate format by calling our ADA Coordinator at (617) 574-6872.

DEP on the World Wide Web: http://www.state.ma.us/dep
Printed on Recycled Paper

#### **Mailing Address**

The address to which you want future registration packages and notifications sent, if different than the street address above

## 2. FACILITY CONTACT PERSON

The name of the individual who should be contacted for further information about the form(s)

**NOTE:** This person must be located at the facility.

### 3. FACILITY OWNER

The type of facility owner: P=Private, L=Local Government, S=State Government, F=Federal Government, U=Utility

#### 4. ID NUMBERS

#### **SSEIS ID Number**

LEAVE BLANK. This is the ID number DEP assigns to identify your facility in the Stationary Source Emission Inventory System (SSEIS) DEP's computer system for storing this information.

#### FMF ID number

LEAVE BLANK. This is the unique Identification Number DEP assigns to represent your entire facility in its information management systems.

### Hazardous Waste ID Number

- FOR HAZARDOUS WASTE GENERATORS: The hazardous waste generator identification number EPA or DEP assigned you, that you put on your hazardous waste management manifests
- IF YOUR FACILITY DOES NOT GENERATE HAZARDOUS WASTE: Write NA.

### 5. UTM COORDINATES

Universal Tranverse Mercator coordinates for your facility can be found on a local USGS Topographic maps. Latitude and Longitude coordinates may also be submitted.

Please see Appendix C: Example Calculations for an explanation of how to find your UTM coordinates on a USGS Topographical Map.

# 6. NORTH AMERICAN INDUSTRY CLASSIFICATION CODE(S) NAICS

The six-digit code that classifies facilities by the types of products they produce.

Use the SIX DIGIT code as submitted on your facility's Federal IRS forms.

### 7. FACILITY DESCRIPTION

What is being produced and how it is being produced at this facility (e.g., coated fabric, electricity, appliances)

## 8. PERMIT REPORTING /MONITORING REQUIREMENT

Whether or not:

- Your plan approval or air operating permit requires that you report on your process, fuel use, or emissions on a regular schedule
- ✓ Your plan approval or air operating permit requires you to have installed monitoring equipment in your stack

## 9. DOES YOUR FACILITY UTILIZE ANY ...

...OF THE HAZARDOUS AIR POLLUTANT CHEMICALS REGULATED UNDER SECTION 112 OF THE CLEAN AIR ACT?

YES or NO

The list of these chemicals can be found in the BWP CAA-HAPs Form.

### 10. HOURS OF OPERATION

- ✓ *Typical* start and end times for the facility
- ✓ The days of the week the facility is *typically* operated.

### 11. NUMBER OF EMPLOYEES

The maximum number of employees that worked at the facility during the day during the calendar year being reported on

EXCLUDE from this count those employees that met BOTH of the following conditions:

✓ the employee worked less than 17 hours a week

AND

✓ The employee worked less than 20 weeks per year.

Include in the your count those employees that met only one of the preceding conditions.

### **B CERTIFICATION**

Signature Of Responsible Official, Signed Under The Pains And Penalties Of Perjury This Certification statement must be reviewed and signed under the pains and penalties of perjury by a responsible official ① at the location. If an agent has been designated to fill out this form, the responsible official must review the forms and sign the certification statement.

**CAUTION:** In order to be considered a "responsible official" an individual working at the facility must meet the criteria listed in Appendix A: Definitions.

**Print Name** The responsible official's name

**Title** The responsible official's title

**Date** Date the responsible official signed the form



### JANE SWIFT Acting Governor

## COMMONWEALTH OF MASSACHUSETTS EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS

### DEPARTMENT OF ENVIRONMENTAL PROTECTION

ONE WINTER STREET, BOSTON, MA 02108 617-292-5500

BOB DURAND Secretary

LAUREN A. LISS Commissioner

### Section 2.3: BWP AQ AP-1 Emission Unit – Fuel Utilization Equipment Instructions

#### **PURPOSE**

This form describes fuel use, equipment, and emissions at the facility during the calendar year being reported from all combustion processes except waste incineration and air pollution control equipment "combustion devices" such as flares or afterburners.

### WHEN IS THIS FORM APPLICABLE?

✓ IF YOUR FACILITY IS FILING ITS FIRST SOURCE REGISTRATION:

This form APPLIES IF your facility has **a total energy input** capacity in excess of 10 million BTU per hour. Be sure to include internal combustion engines such as diesel and turbines driving emergency generators also include space heaters in this sum. EXCLUDE THE FOLLOWING COMBUSTION ACTIVITIES:

- Waste incineration and their auxiliary burners (reported on the AP-3 form)
- Air pollution control equipment (reported on the appropriate AP-1, AP-2 or AP-3 form).

If this form is not applicable write NA on the form and submit it with the rest of the package.

✓ IF YOUR FACILITY HAS SUBMITTED PREVIOUS SOURCE REGISTRATIONS:

Submit this form IF your facility installed new combustion equipment since your last source registration and that equipment is subject to a regulatory requirement in 310 CMR 7.03, 7.19, or 7.02, or the requirement to obtain a plan approval.

HOW MANY VERSIONS OF THIS FORM ARE REQURIED? ✓ Submit one form for each boiler or internal combustion engine (e.g., diesels or turbines) with a rated capacity EQUAL to or GREATER THAN the thresholds listed below. Each unit exceeding the threshold is considered a separate emission unit, and must be reported on it's own BWP AQ AP-1.

Distillate oil >10,000,000 Btu per hr (72 gal/hr)

Residual oil > 5,000,000 Btu per hr (32 gal/hr)

Natural gas >10,000,000 Btu per hr (100 Therms)

Solid fuel > 3,000,000 Btu per hr

Used oil fuel > 3,000,000 Btu per hr (19 gal/hr)

Landfill gas > 3,000,000 Btu per hr (180,000 cf/hr

✓ Fuel burning units can be combined as one emission unit IF EACH INDIVIDUAL UNIT is of the same type and is smaller than the threshold listed above.

CAUTION: Once you exceed the threshold for reporting on ANY combustion unit, you must report on ALL sources of combustion at your facility. No combustion sources are below the threshold.

**N** TIP

If you obtained a plan approval for the emission unit(s) you are reporting on for the first time, you will have received two documents from DEP: a plan approval letter and a copy of the permit application that you submitted to DEP. It will be easier to fill out the Source Registration forms if you refer to those two documents.

#### 1. FACILITY NAME

The name of the facility or plant that is reporting

The name must uniquely identify the facility. If the parent corporation operates more than one facility, the corporate name alone is insufficient.

IF YOUR FACILITY HAS SUBMITTED PREVIOUS SOURCE REGISTRATIONS: You must use the same name that you are reporting on your side-by-side computer printout.

2. EMISSION UNIT NAME/ NUMBER

Assign the emission unit a name/number in order to uniquely identify it. Example: Boiler #1, Emergency Generator #2, Fire Pump #3 etc.

### 3. EQUIPMENT

Type

The type of combustion equipment (e.g., boiler, oven, dryer, space heater, furnace, engine, etc.)

Date of installation

The month, day, and year the emission unit was installed at the facility

① This term is defined in APPENDIX A: DEFINITIONS

4.	MANUFACTURER	Manufacturer of the equipment
5.	MODEL NUMBER	The manufacturer's model number for the equipment
6.	MAXIMUM INPUT RATING	The manufacturer's rating for this emission unit  TIP: The rating is located on a metal plate on the unit. It is usually expressed in BTU per hour or gallons per hour for engines.
7.	BURNER MANUFACTURER	The manufacturer that built the burner for this emission unit
8.	TYPE OF BURNER	The type of burner (e.g., rotary, mechanical atomizer, steam atomizer, air atomizer, etc.)
9.	NUMBER OF BURNERS IN COMBUSTION UNIT	The number of burners attached to this emission unit
10. FUELS		
Type and grade		Type and grade of fuel burned in this unit (e.g., distillate oil, residual oil, natural gas, propane, solid fuel, landfill gas, used oil fuel, etc.)
	Sulfur content	The percentage of sulfur by weight in above fuel type  TIP: This is determined by analysis of a fuel sample or can be found on the receipt from your fuel dealer.
	Maximum fuel firing rate	The maximum fuel that all burners in this emission unit can fire in one hour, and the units of measurement (e.g., gallons per hour, tons per hour, million cubic feet per hour, etc.)

### Percent used for heating

The proportion of the total amount of fuel used in this emission unit that is used to heat the facility

#### Annual usage

The amount of fuel used in this emission unit during the calendar year being reported, and the units of measurement (e.g., gallons, cubic feet, tons, etc.)

## 11. AIR POLLUTION CONTROL EQUIPMENT (APCE)

Answer YES if air pollution control equipment controls air contaminants from this emission unit. Answer NO if there is no air pollution control equipment.

### **Type**

The name and the code number (from APPENDIX D) for the type of air pollution control equipment used to control emissions from this combustion unit.

#### Model/Manufacturer

The manufacturer and model number of this Air Pollution Control Equipment (APCE).

#### **Pollutants Controlled**

The air contaminants controlled by the air pollution control equipment

USE OF THE "OTHER" SECTION: List any substances not already listed on the form that you are required to control per your plan approval, operating permit, or applicable regulation.

#### **Efficiency (percent)**

The Capture Efficiency is the percentage of the emissions that reach the air pollution control unit.

The *Control Efficiency* is the percentage of the emissions that are removed from the air stream by the Air Pollution Control Equipment.

- ✓ IF YOU HAVE STACK-TESTING DATA ON CONTROL EFFICIENCY: Use that information.
- ✓ IF YOU DO NOT HAVE STACK-TESTING DATA: Use the manufacturer's suggested control efficiency. This is usually expressed as a range of percentages (e.g., 90%-97%). Use the upper end of the range.

### 12. DATE OF INSTALLATION

The month, day, and year the APCE was installed at the facility

### DEP Air Quality Approvals ...

NOTE: Some emission units will not have plan approvals because they were "permitted by rule" – installed in accordance with the provisions of 310 CMR 7.03, they are below the threshold for which a plan approval or permit is required, or they were installed before the effective date of the regulation.

IF A PLAN APPROVAL IS REQUIRED: Write the number for the plan approval that allowed the installation of the emission unit. This number is found on the letter sent by DEP that informed you that they approved the unit.

IF A PLAN APPROVAL IS NOT REQUIRED: Cite the regulation under which the equipment was installed.

### 13. FUEL SUPPLIER NAME AND ADDRESS

The name and address of fuel supplier for the equipment

#### 14. STACK DATA

Assign a unique name or number to the stack to which this emission unit discharges.

#### **Dimensions**

The height in feet and the inside diameter in feet of the stack to which this emission unit discharges

### Range of gas velocity

The lowest and highest speeds with which the exhaust gasses exit the top of the stack, in feet per second (FPS)

### Range of exit temperature

The lowest and highest temperature at which the exhaust gasses exit the top of the stack, in degrees Fahrenheit

### Stack material of construction

The material used to construct the stack (e.g., metal, refractory)

#### 15. MONITORS

Information about continuous emission and opacity monitors

#### Manufacturer

The name of the manufacturer of the monitoring equipment attached to the stack

#### Model number

The model number the manufacturer assigns to the monitor

#### Recorder

Whether or not a recorder is attached to the monitor

Audible alarm system

Whether or not an audible alarm is attached to the monitor

**Data System** 

Whether or not a data system that continuously logs monitoring data for future review is attached

to the monitor

**Date in Service** 

The month, day, and year the monitoring system was installed

**Monitoring Pollutants** 

The air contaminants controlled by the air pollution control equipment

USE OF THE "OTHER" SECTION: List any substances not already listed on the form that you are required to monitor per your plan approval, operating permit, or applicable regulation.

### 16. TOTAL EMISSIONS

The Actual ①, Potential ② and, if applicable, Permitted ② emissions from this unit for each listed air contaminant during the calendar year being reported

USE OF THE "OTHER" SECTION: List any substances not already listed on the form that you are required to control per your plan approval, operating permit, or applicable regulation.

#### **Actual Emissions**

The actual emissions for the calendar year being reported

Please see Appendix C: Example Calculations.

NOTE: In many cases emission factors found in EPA's AP-42 (<a href="http://www.epa.gov/ttn/chief">http://www.epa.gov/ttn/chief</a>) can be used to estimate actual emissions.

The AP-42 emission factors are generic. Therefore they are NOT appropriate for facilities that are subject to certain BACT (Best Available Control Technology) requirements or RACT (Reasonably Available Control Technology) requirements such as NO<sub>X</sub> RACT for boilers. Facilities subject to RACT or BACT must use the emission factors determined through stack testing or the permitting process because **AP-42 will overstate emissions**.

### **Potential Emissions**

Potential emissions ① are the maximum allowable emissions under the terms of the applicable plan approval, or, if no plan approval is required, under the applicable regulations

Please see Appendix C: Example Calculations.

potential emissions help to define the regulatory requirements to which your facility is subject. For example, if your facility-wide potential emissions exceed the major source thresholds  $\mathcal{D}$  for any air contaminant including HAPs  $\mathcal{D}$ , you are required to obtain an air operating permit pursuant to 310 CMR 7 Appendix C, or to restrict your emissions through a federally enforceable permit (RES) pursuant to (310 CMR 7.02(9)). Contact your DEP regional office if you exceed a major source threshold and you have not filed an application for an air operating permit or a RES. The names and addresses of the Regional Offices are listed in Appendix F.

#### **Permitted Emissions**

Maximum annual emissions allowed pursuant to your permit or plan approval

This question only applies if this emission unit is subject to a plan approval or permit that restricts operations or emissions. Permitted emissions equal potential emissions for facilities with operating restrictions.

### **Approval Number**

NOTE: Some emission units will not have plan approvals because they are "permitted by rule" – installed in accordance with the provisions of 310 CMR 7.03, they are below the threshold for which a plan approval or permit is required, or they were installed prior to the effective date of the regulation.

IF A PLAN APPROVAL IS REQUIRED: Write the approval number for the plan approval that approved the installation of the emission unit/segment. This number is found on the letter sent by DEP that informed you that they approved the unit.

IF A PLAN APPROVAL IS NOT REQUIRED: Cite the regulation under which the equipment was installed.

### **B. CERTIFICATION**

This Certification statement must be reviewed and signed under the pains and penalties of perjury by a responsible official at the location. If an agent has been designated to fill out this form, the responsible official must review the forms and sign the certification statement.

CAUTION: In order to be considered a "responsible official "an individual working at the facility must meet the criteria listed in Appendix A: Definitions.

**Print Name** The responsible official's name

**Title** The responsible official's title

**Date** Date the responsible official signed the form



### JANE SWIFT Acting Governor

## COMMONWEALTH OF MASSACHUSETTS EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS

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BOB DURAND Secretary

LAUREN A. LISS Commissioner

### Section 2.4: BWP AQ AP-2 Emission Unit – Process Equipment Instructions

#### **PURPOSE**

This form describes equipment, processes, and associated air pollution emissions from non-combustion related production processes for the calendar year being reported.

### WHEN IS THIS FORM APPLICABLE?

### ✓ IF YOUR FACILITY IS FILING ITS FIRST SOURCE REGISTRATION:

This form APPLIES IF your facility releases any air contaminants in excess of the reporting threshold for that air contaminant through a stack or indirectly through vents from any production process EXCEPT:

- -fuel burning (these processes are reported on an AP-1),
- -incineration (these processes are reported on an AP-3),
- -organic material storage (this process is reported on an AP-4),
- -INSIGNIFICANT ACTIVITIES ①.

IF THIS FORM IS NOT APPLICABLE: Write NA on the form and submit it with the rest of the package.

✓ IF YOUR FACILITY HAS SUBMITTED PREVIOUS SOURCE REGISTRATIONS:

Submit this form IF your facility has installed new equipment since your last source registration and that equipment is subject to a regulatory requirement in 310 CMR 7.03, 7.18, or 7.02, or is required to have a plan approval.

HOW MANY VERSIONS OF THIS FORM ARE REQUIRED? ✓ One form is required for each emission unit. Any particular production line is a series of unit operations: activities, or processes used to produce a product. A unit operation is generally a piece of equipment or a step in the production process. Each unit operation that releases an air contaminant is considered an "emission unit".

TIP: See AP-42 (<a href="http://www.epa.gov/ttn/chief">http://www.epa.gov/ttn/chief</a>) for a list of the various operations and the air contaminants they release.

✓ Identical pieces of equipment that are used interchangeably to create the same product may be reported on one form.

For example, if the facility has three different coating operations, one AP-2 is required for each. However, two coating lines using the same equipment and raw materials, operated in tandem to produce the same product, can be considered one emission unit and combined on one BWP AQ AP-2.

**CAUTION:** Once you are required to report on the emission of any air contaminant from emission unit reported on an AP-2, you must report on ALL operations at your facility that release that contaminant, EXCEPT "insignificant activities".

N TIP

If you obtained a plan approval for the emission unit(s) you are reporting on you will have received two documents from DEP: a plan approval letter and a copy of the permit application that you submitted to DEP. It will be easier to fill out the Source Registration forms if you refer to those two documents.

### 1. FACILITY NAME

The name of the facility or plant that is reporting

The name must uniquely identify the facility. If the parent corporation operates more than one facility, the corporate name alone is insufficient.

IF YOUR FACILITY HAS SUBMITTED PREVIOUS SOURCE REGISTRATIONS: You must use the same name that you are reporting on your side-by-side computer printout.

2. EMISSION UNIT NAME OR IDENTIFYING NUMBER Assign the emission unit a name/number in order to uniquely identify it.

### 3. PROCESS NAME/ DESCRIPTION

A brief description of the process and the types of activities performed by equipment in the emission unit (e.g., Cleaning – degreasing)

Include the SCC Code. This is a code for the type of unit operation or production process. EPA's AP-42 (<a href="http://www.epa.gov/ttn/chief">http://www.epa.gov/ttn/chief</a>) contains the codes for each type of process as well as emission factors that can, in certain circumstances, be used to calculate emissions from each unit process.

4.	TYPE OF EQUIPMENT	The type of equipment (e.g., banbury mixer, degreaser) used in the emission unit
5.	LOCATION OF EQUIPMENT	Provide sufficient information to locate the emission unit at your facility. (building number, floor plans etc.)
6.	NUMBER OF PIECES OF EQUIPMENT CONNECTED TO CONTROL EQUIPMENT	The total number of pieces of equipment in the emission unit attached to the Air Pollution Control Equipment (APCE) (e.g., 4 degreasers)
7.	DATE IN SERVICE	The month, day, and year the emission unit was installed at the facility
8.	MANUFACTURER	The manufacturer of the equipment in this emission unit
9.	MODEL NUMBER	The model number the manufacturer assigns to the equipment
10.	MAXIMUM PROCESS RATE	
	Raw material(s) name	List of the raw material(s) used in the emission unit that can generate air contaminants
	Raw material(s) rate	The maximum rate at which raw materials can be used in the emission unit, expressed in measurable units (e.g., pounds of material or per hour or gallons per hour)
,	Total per year/actual	How much of each raw material was used during the calendar year being reported and the unit of measure used

## Finished material(s) (name)

The finished material(s) produced in this unit.

### Finished material(s) (rate)

The maximum operating rate possible, expressed in measurable units (e.g., pounds, gallons)

Total per year

How much actual finished material was produced in calendar year being reported

### 11. OPERATING SCHEDULE

Hours per day

The average number of hours the emission unit was operated each day the emission unit operated

during the calendar year being reported

(Total hours operated during the calendar year being reported) / (Total days operated during the

calendar year being reported)

Days per week Average number of days per week the emission unit was operated each week the emission unit

operated during the calendar year being reported

(Total days operated during the calendar year being reported) / (Total weeks operated during the

calendar year being reported)

Weeks per year Actual number of weeks the emission unit was operated during the calendar year being reported

**Start/end time** Typical start and end time for the emission unit

12. AIR POLLUTION CONTROL EQUIPMENT

Answer YES if air pollution control equipment (APCE) controls emissions from this emission

unit.

Answer NO if there is no APCE for this emission unit.

**Type** The name and the code number (from Appendix D) for the type of air pollution control equipment

used to control air contaminants from this emission unit

**Model/Manufacturer** The manufacturer and model number of this air pollution control equipment

**Pollutants Controlled** The air contaminants controlled by the air pollution control equipment

USE OF THE "OTHER" SECTION: List any substances other than those listed on the form that you are required to control per your plan approval, operating permit, or applicable regulation.

#### **Efficiency (percent)**

The Capture Efficiency is the percentage of the emissions that reach the air pollution control unit.

The *Control Efficiency* is the percentage of the emissions that are removed from the air stream by the APCE.

- ✓ IF YOU HAVE STACK-TESTING DATA ON CONTROL EFFICIENCY: Use that information.
- ✓ IF YOU DO NOT HAVE STACK-TESTING DATA: Use the manufacturer's suggested control efficiency. This is usually expressed as a range of percentages (e.g., 90%-97%). Use the upper end of the range.

# 13. NUMBER OF PIECES OF EQUIPMENT DESCRIBED ABOVE

The number of emission units attached to the APCE

### 14. DATE OF INSTALLATION

The month, day, and year APCE was installed at the facility

### 15. APPLICABLE DEP AIR QUALITY APPROVALS

NOTE: Some emission units will not have plan approvals because they are "permitted by rule" – installed in accordance with the provisions of 310 CMR 7.03, they are below the threshold for which a plan approval or permit is required, or they were installed before the effective date of the regulation.

### Applicable DEP Air Quality Approval

ONLY COMPLETE IF A PLAN APPROVAL IS REQUIRED: State the approval number for the plan approval that allowed the installation of the emission unit. This number is found on the letter sent by DEP that informed you that they approved the APCE.

### Exempt under 310 CMR Section 7.02 (2)

Answer YES if the APCE was exempt under 310 CMR Section 7.02 (4) or 7.02(5).

Answer NO if it was not.

### Installed under Section 7.03

Answer YES if the APCE was installed under 310 CMR Section 7.03.

Answer NO if it was not.

#### 16. STACK DATA

Assign a name or number that uniquely identifies the stack associated with this emission unit.

#### **Dimensions**

The height in feet and the inside diameter in inches of the stack to which this emission unit discharges

### Range of exit gas velocity

The lowest and highest speeds at which the exhaust gasses exit the top of the stack, in feet per second (FPS)

### Range of exit temperature

The lowest and highest temperature at which the exhaust gasses exit the top of the stack, in degrees Fahrenheit

### Stack material of construction

The material used to construct the stack (e.g., metal or refractory)

### 17. TOTAL EMISSIONS

The Actual ①, Potential ② and, if applicable, Permitted ② emissions from this unit for each listed air contaminant during the calendar year being reported

USE OF THE "OTHER" SECTION: List any substances in addition to those already listed on the form that you are required to control per your plan approval, operating permit, or applicable regulation.

Complete this section for VOCs AFTER you have completed each required BWP AQ AP-5 form.

#### **Actual Emissions**

The actual emissions for the calendar year being reported

Please see the Appendix C: Example Calculations.

NOTE for VOCs: emissions from this emission unit will be the sum of emissions from each organic compound reported on an AP 5. Complete this section AFTER you have completed the AP 5 forms.

TIP: In many cases the emission factors found in EPA's AP-42 (<a href="http://www.epa.gov/ttn/chief">http://www.epa.gov/ttn/chief</a>) can be used to calculate actual emissions.

The AP-42 emission factors are generic. Therefore they are NOT appropriate for facilities that are subject to certain BACT (Best Available Control Technology) requirements or RACT (Reasonably Available Control Technology) requirements such as NO<sub>X</sub> RACT for boilers. Facilities subject to RACT or BACT must use the emission factors determined through stack testing or the permitting process because AP-42 will overstate emissions.

#### **Potential Emissions**

Potential emissions ① are the maximum allowable emissions under the terms of the applicable plan approval, or, if no plan approval is required, under the applicable regulations.

See the Appendix C: Example Calculations.

CAUTION: Pay CLOSE attention to the "potential emissions" calculations, because potential emissions help to define the regulatory requirements to which your facility is subject.

For example,

- ✓ For example, if your facility-wide potential emissions exceed the major source thresholds ② for any air contaminant including HAPs ③, you are required to obtain an air operating permit pursuant to 310 CMR 7 Appendix C, or to restrict your emissions through a federally enforceable permit (RES) pursuant to (310 CMR 7.02(9)). Contact your DEP regional office if you exceed a major source threshold and you have not filed an application for an air operating permit or a RES. The names and addresses of the Regional Offices are listed in Appendix F.
- ✓ Similarly, if your potential emissions of Hazardous Air Pollutants ⊕ (HAPS) exceed the applicable Maximum Achievable Control Technology (MACT) standard threshold (for most standards this is a major source threshold) in 40 CFR Part 63 as of the substantive compliance date ⊕ for that standard, EPA policy states that your facility would NOT be allowed to restrict your potential emissions below the applicable MACT threshold. Thus, according to EPA policy, unless your facility restricts its potential emissions to under the threshold BEFORE the substantive compliance date, your facility would be required to comply with the MACT standard. Furthermore, as a consequence of being subject to a MACT standard, your facility would also be required to obtain an air operating permit, pursuant to 310 CMR 7 Appendix C. The list of MACT standards and their substantive compliance dates can be found in Appendix E.

### **Permitted emissions**

Maximum annual emissions allowed pursuant to your permit or plan approval

This question only applies if this emission unit is subject to a plan approval or permit that restricts operations or emissions. If you hold such a plan approval or permit, permitted emissions equal potential emissions

#### **Approval Number**

■NOTE: Some emission units will not have plan approvals because they are "permitted by rule" – installed in accordance with the provisions of 310 CMR 7.03 or 7.02(2), they are below the threshold for which a plan approval or permit is required, or they were installed before the effective date of the regulation.

IF A PLAN APPROVAL IS REQUIRED: Write the approval number for the plan approval that allowed the installation of the emission unit. This number is found on the letter sent by DEP that informed you that they approved the unit.

IF A PLAN APPROVAL IS NOT REQUIRED: Cite the regulation under which the equipment was installed.

### **B. CERTIFICATION**

Signature Of Responsible Official, Signed Under The Pains And Penalties Of Perjury This Certification statement must be reviewed and signed under the pains and penalties of perjury by a responsible official at the location. If an agent has been designated to fill out this form, the responsible official must review the forms and sign the certification statement.

CAUTION: In order to be considered a "responsible official ①" an individual working at the facility must meet the criteria listed in Appendix A: Definitions.

**Print Name** The responsible official's name

**Title** The responsible official's title

**Date** Date the responsible official signed the form



### JANE SWIFT Acting Governor

## COMMONWEALTH OF MASSACHUSETTS EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS

### DEPARTMENT OF ENVIRONMENTAL PROTECTION

ONE WINTER STREET, BOSTON, MA 02108 617-292-5500

BOB DURAND Secretary LAUREN A. LISS Commissioner

### Section 2.5: BWP AQ AP-3 Emission Unit – Incinerator Instructions

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This form provides DEP with information about the equipment, processes, and associated air pollution emissions during the calendar year being reported from the incineration of waste such as solid waste, municipal waste, medical waste, sludge, and other combustible waste materials.

### WHEN IS THIS FORM APPLICABLE?

This form is applicable for any waste incinerator capable of reducing equal to or greater than 50 pounds of waste per hour, EXCEPT incineration units used as air pollution control equipment. These units are reported on the appropriate AP-1, AP-2, or AP-4 form.

**NOTE**: You do not have to complete a BWP AP1 for this emission unit.

IF THE FORM IS NOT APPLICABLE: Write NA on the form and submit it with the rest of the package.

HOW MANY VERSIONS OF THIS FORM ARE REQUIRED? Submit one form for each individual incinerator at your facility.



If you obtained a plan approval for the emission unit(s) you are reporting on for the first time, you will have received two documents from DEP: a plan approval letter and a copy of the permit application that you submitted to DEP. It will be easier to fill out the Source Registration forms if you refer to those two documents.

### 1. FACILITY NAME

The name of the facility or plant that is reporting

The name must uniquely identify the facility. If the parent corporation operates more than one facility, the corporate name alone is insufficient.

IF YOUR FACILITY HAS SUBMITTED PREVIOUS SOURCE REGISTRATIONS: You must use the same name that you are reporting on your side-by-side computer printout.

### 2. EMISSION UNIT NAME OR IDENTIFYING NUMBER

Assign the emission unit a unique name/number in order to uniquely identify it.

### 3. INCINERATOR TYPE

**Type** The type of equipment (e.g., medical, municipal, etc.) used in the emission unit

**Manufacturer** The name of the firm that manufactured this equipment

**Model number** The model number the manufacturer assigns to this piece of equipment

Maximum operating capacity

The manufacturer's maximum operating rate for the emission unit TIP: This information is located on a metal plate on the unit.

### 4. OPERATING SCHEDULE

**Hours per day** Average number of days per week the emission unit was operated each week the emission unit

operated during the calendar year being reported

(Total hours operated during the calendar year being reported) / (Total days operated during the

calendar year being reported)

Days per week Average number of days per week the emission unit was operated each week the emission unit

operated during the calendar year being reported

(Total days operated during the calendar year being reported) / (Total weeks operated during the

calendar year being reported)

Weeks per year Actual number of weeks the emission unit was operated during the calendar year being reported

Start/end time	Typical start and end time for the emission unit	
5. WASTE TYPE	Type of waste (e.g., rubbish, demolition, hazardous, biological) being burned	
6. CHARGING RATE		
Batches per hour	The number of times per hour the unit is charged with waste	
Pounds per Batch	The maximum weight per batch, in pounds or tons for large units.	
7. HEAT RECOVERY	Whether or not the incinerator has a heat recovery unit attached	
8. NUMBER OF HEARTHS	The total number of individual hearths in the emission unit	
9. TOTAL HEARTH AREA	The total square footage of all of the hearths	
10. AUTOMATIC FEEDER		
11. TEMPERATURE RANGE	The typical range of temperature, in degrees Fahrenheit	
12. RETENTION TIME	The amount of time the incinerated material is held in the secondary chamber	

### 13. AUXILIARY BURNERS

**Manufacturer** The burner manufacturer

**Model Number** The model number the manufacturer assigns to this burner

**Type of fuel** The type and grade of the fuel burned in the unit (e.g., distillate oil, natural gas, etc.)

**Amount** The amount of fuel burned in this unit during the calendar year being reported

Sulfur percentage by weight

The sulfur content of the fuel used in this unit, expressed as a percent of weight

**Maximum rating** The maximum amount of fuel the burners can fire in one hour (e.g., gallons per hour)

## 14. AIR POLLUTION CONTROL EQUIPMENT

Answer YES if air pollution control equipment controls (APCE) emissions from this emission unit.

Answer NO if it does not.

Type (Scrubber, fabric filter, etc.)

The name and the code number (from Appendix D) for the type of air pollution control equipment used to control air contaminants from this emission unit

Model/Manufacturer

The manufacturer and model number of the air pollution control equipment

**Pollutants Controlled** 

The air contaminants controlled by the air pollution control equipment

USE OF THE "OTHER" SECTION: List any substances other than those listed on the form that you are required to control per your plan approval, operating permit, or applicable regulation.

**Efficiency (percent)** 

The Capture Efficiency is the percentage of the emissions that reach the air pollution control unit.

The *Control Efficiency* is the percentage of the emissions that are removed from the air stream by the APCE.

- ✓ IF YOU HAVE STACK-TESTING DATA ON CONTROL EFFICIENCY: Use that information.
- ✓ IF YOU DO NOT HAVE STACK-TESTING DATA: Use the manufacturer's suggested control efficiency. This is usually expressed as a range of percentages (e.g., 90%-97%). Use the upper end of the range.

#### **Date Of Installation**

The month, day, and year air pollution control unit was installed at the facility

## Applicable DEP Air Quality Approvals

The approval number for the air quality plan approval that allowed the installation of the air pollution control equipment. This number is found on the letter sent by DEP that informed you that they approved the unit.

#### 15. STACK DATA

Assign a name or number that uniquely identifies the stack associated with this emission unit.

#### **Dimensions**

The height in feet and the inside diameter in inches of the stack to which this emission unit discharges

## Range of exit gas velocity

The lowest and highest speeds at which the exhaust gasses exit the top of the stack, in feet per second (FPS)

## Range of exit temperature

The lowest and highest temperature at which the exhaust gasses exit the top of the stack, in degrees Fahrenheit

### Stack material of construction

The material used to construct the stack (e.g., metal or refractory)

## 16. TOTAL EMISSIONS

The Actual ①, Potential ② and, if applicable, Permitted ② emissions from this unit for each listed air contaminant during the calendar year being reported

USE OF THE "OTHER" SECTION: List any substances other than those listed on the form that you are required to control per your plan approval, operating permit, or applicable regulation.

#### **Actual Emissions**

The actual emissions for the calendar year being reported

Please see Appendix C: Example Calculations.

NOTE: In many cases emission factors found in EPA's AP-42 (<a href="http://www.epa.gov/ttn/chief">http://www.epa.gov/ttn/chief</a>) can be used to calculate actual emissions.

The AP-42 emission factors are generic. Therefore they are NOT appropriate for facilities that are subject to certain BACT (Best Available Control Technology) requirements or RACT (Reasonably Available Control Technology) requirements such as NO<sub>X</sub> RACT for boilers. Facilities subject to RACT or BACT must use the emission factors determined through stack testing or the permitting process because AP-42 will overstate emissions.

#### **Potential Emissions**

Potential emissions ① are the maximum allowable emissions under the terms of the applicable plan approval, or, if no plan approval is required, under the applicable regulations.

See Appendix C: Example Calculations.

potential emissions help to define the regulatory requirements to which your facility is subject. If your potential emissions exceed the major source thresholds for facilities, you are required to obtain an air operating permit pursuant to 310 CMR 7 Appendix C or a federally enforceable operating restriction (RES) pursuant to 310 CMR 7.02(9). Contact your DEP regional office if you exceed the major source thresholds and have not applied for an air operating permit or an RES. The telephone numbers and addresses of the regional offices are listed in Appendix F.

#### **Permitted emissions**

The maximum annual emissions allowed under the terms of your permit

This question only applies if this emission unit is subject to a plan approval or permit that restricts operations or emissions. If you hold such a plan approval or permit, permitted emissions equal potential emissions.

#### **B. CERTIFICATION**

Signature Of Responsible Official, Signed Under The Pains And Penalties Of Perjury This Certification statement must be reviewed and signed under the pains and penalties of perjury by a responsible official at the location. If an agent has been designated to fill out this form, the responsible official must review the forms and sign the certification statement.

CAUTION: In order to be considered a "responsible official "an individual working at the facility must meet the criteria listed in Appendix A: Definitions.

**Print Name** The responsible official's name

**Title** The responsible official's title

**Date** Date the responsible official signed the form



#### JANE SWIFT Acting Governor

## COMMONWEALTH OF MASSACHUSETTS EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS

#### DEPARTMENT OF ENVIRONMENTAL PROTECTION

ONE WINTER STREET, BOSTON, MA 02108 617-292-5500

BOB DURAND Secretary

LAUREN A. LISS Commissioner

#### Section 2.6: BWP AQ AP-4 Emission Unit – Organic Material Storage Instructions

**PURPOSE** 

This form summarizes the equipment used and the organic materials ① stored or transferred for the calendar year being reported.

### WHEN IS THIS FORM APPLICABLE?

✓ IF YOUR FACILITY IS FILING ITS FIRST SOURCE REGISTRATION:

This form APPLIES IF your facility stores organic material in any below- or aboveground container with a capacity greater than 500 gallons.

IF THIS FORM IS NOT APPLICABLE: Write NA on the form and submit it with the rest of the package.

✓ IF YOUR FACILITY HAS SUBMITTED PREVIOUS SOURCE REGISTRATIONS:

Submit this form IF your facility has installed a new storage container for an organic compound that was larger than 500 gallons since your last source registration.

HOW MANY VERSIONS OF THIS FORM ARE REQUIRED? One form must be completed for each above or under ground storage container containing "Organic Material ①" with a capacity greater than 500 gallons.



If you obtained a plan approval for the emission unit(s) you are reporting on for the first time, you will have received two documents from DEP: a plan approval letter and a copy of the permit application that you submitted to DEP. It will be easier to fill out the Source Registration forms if you refer to those two documents.

<b>1. FACILITY NAME</b> The name of the facility or plant that is reporting		The name of the facility or plant that is reporting
		The name must uniquely identify the facility. If the parent corporation operates more than one facility, the corporate name alone is insufficient.
		IF YOUR FACILITY HAS SUBMITTED PREVIOUS SOURCE REGISTRATIONS: You must use the same name that you are reporting on your side-by-side computer printout.
2.	EMISSION UNIT NAME OR IDENTIFYING NUMBER	Assign the emission unit a name/number in order to uniquely identify it.
3.	ABOVE/BELOW GROUND	Whether or not the storage container is above or below ground
4.	ТҮРЕ	The type of storage container. (e.g., tank, tote, etc.)
5.	PHYSICAL DESCRIPTION	The age and color of storage container
6.	DIMENSIONS	The height and diameter of storage container, in feet
7.	CAPACITY	The maximum amount of liquid capable of being stored in the container, and the units of measurement
8.	CONSTRUCTION TYPE	The material used to construct the storage container (e.g., steel, fiberglass, etc.)
9.	MATERIAL	

**STORED** 

Name The specific organic material being stored in the container

CAS number IF THE SUBSTANCE IS A ORGANIC COMPOUND: The Chemical Abstract Service (CAS)

number

TIP: Obtain the CAS number from the Material Safety Data Sheet (MSDS) for the

substance.

IF THE SUBSTANCE DOES NOT HAVE A CAS NUMBER BECAUSE IT IS A MIXTURE:

Write NA.

Vapor pressure and temperature

Obtain these numbers from the MSDS for the substance.

Reid Vapor Pressure (RVP)- gasoline only

Only provide this information for gasoline.

Obtain this from the MSDS.

Total oxygengasoline only Only provide this information for gasoline.

Obtain this from the MSDS.

Oxygenate namegasoline only

Only provide this information for gasoline.

Obtain this from the MSDS.

Annual throughput Total amount of the material added to the storage container during the calendar year being

reported, and the units of measurement

10. LOADING /TRANSFERRING

Type of vehicle loading and transferring (receiving/transferring) the organic material

11. AIR POLLUTION CONTROL EQUIPMENT

Answer YES if air pollution control equipment controls emissions from this emission unit.

Answer no if it does not.

Type (Scrubber, fabric filter, etc).

The name and the code number (from APPENDIX D) for the type of air pollution control

equipment used to control air contaminants from this emission unit

**Model/Manufacturer** The manufacturer and model number of this air pollution control equipment

#### **Pollutants Controlled**

The air contaminants controlled by the air pollution control equipment

USE OF THE "OTHER" SECTION: List any substances other than those listed on the form that you are required to control per your plan approval, operating permit, or applicable regulation.

#### **Efficiency (percent)**

% Capture is the percentage of the emissions from the combustion unit that reach the air pollution control equipment

% Control is the percentage of the contaminants removed from the air stream.

- ✓ IF YOU HAVE STACK-TESTING DATA ON CONTROL EFFICIENCY: Use that number.
- ✓ IF YOU DO NOT HAVE STACK-TESTING DATA: Use the "manufacturers suggested efficiency" for the control of specific pollutants. This can be found in the literature supplied by the manufacturer. It is usually expressed as a range of percentages (e.g., from 89% 95%). Use the highest efficiency in the range.

#### **Date Of Installation**

The month, day, and year the air pollution control unit was installed at the facility

## **Applicable DEP Air Quality Approvals**

The approval number and date for the air quality plan approval that allowed the installation of the air pollution control equipment. This number is found on the letter sent by DEP that informed you that the unit was approved.

NOTE: Some emission units will not have plan approvals because they are "permitted by rule" – installed in accordance with the provisions of 310 CMR 7.03 or 7.02(2), they are below the threshold for which a plan approval or permit is required, or they were installed before the effective date of the regulation.

#### **B. CERTIFICATION**

Signature Of Responsible Official, Signed Under The Pains And Penalties Of Perjury This Certification statement must be reviewed and signed under the pains and penalties of perjury by a responsible official at the location. If an agent has been designated to fill out this form, the responsible official must review the forms and sign the certification statement.

CAUTION: In order to be considered a "responsible official ①" an individual working at the facility must meet the criteria listed in Appendix A: Definitions.

**Print Name** The responsible official's name

**Title** The responsible official's title

**Date** Date the responsible official signed the form



JANE SWIFT

Acting Governor

# COMMONWEALTH OF MASSACHUSETTS EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS

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BOB DURAND Secretary

LAUREN A. LISS Commissioner

#### Section 2.7: BWP AQ AP- 5 Organic Compound Usage Instructions

#### **PURPOSE**

This form summarizes emissions of volatile organic compounds (VOC) ①, Halogenated organic compounds (HOC) ①, and Hydrocarbons (HYC) ① from each organic compound used at your facility.

## WHEN IS THIS FORM APPLICABLE?

✓ IF YOUR FACILITY IS FILING ITS FIRST SOURCE REGISTRATION:

This form APPLIES IF your facility reported VOC, HOC, or HYC emissions on a BWP AQ AP-02 Form.

IF THIS FORM IS NOT APPLICABLE: Write NA on the form and submit it with the rest of the package.

✓ IF YOUR FACILITY HAS SUBMITTED PREVIOUS SOURCE REGISTRATIONS:

Submit this form IF your facility is using a previously unreported organic material ①.

#### HOW MANY VERSIONS ARE REQUIRED?

The forms are linked with the AP –2 Process Emission Unit forms. Each organic compound used in each emission unit must be reported on a BWP AO AP-5.

The number of AP-5's required depends upon the number of organic compounds used at the facility, and the manner in which they are used. Organic compounds can be used in four main ways:

- 1. They can be chemically reacted to manufacture a new substance from other organic compounds (e.g., the production of formaldehyde).
  - NOTE FOR Toxics Use Reduction Act (TURA) REPORTERS: TURA calls this use "manufacturing".
- 2. They can be mixed with other substances to create another product (e.g., a paint, an ink, or another coating).

The reporting forms refer to such products as "formulations" ①

- **NOTE FOR TURA REPORTERS:** TURA calls this use "processing".
- 3. They can be used IN formulations that are used in the manufacture of other products (e.g., the organic chemicals in the inks used to print paper or fabric, in the paints used to coat appliances, or in the solvents used to degrease parts). Organic compounds used in this way are not sold with the product. They volatilize on site and are released to the ambient air.
- 4. They can be used as solvent thinners to thin formulations or clean production equipment.

**NOTE FOR TURA REPORTERS:** TURA calls uses #3 and #4 "otherwise using".

#### HOW MANY VERSIONS OF THIS FORM ARE REQUIRED, Continued

IF AN ORGANIC COMPOUND IS USED IN AN EMISSION UNIT:	SUBMIT:
To manufacture another chemical or to make a formulation ①	One form for EACH individual organic compound used in the emission unit.
As a formulation ① (e.g., to paint, print, or otherwise coat a product)	One AP-5 is required for EACH FORMULATION used in the emission unit.
As a solvent thinner or to clean the formulation ① from the processing equipment	Report the use of that solvent thinner on the same AP-5 you are using to report the formulation itself.
For degreasing	One AP-5 is required for EACH degreasing formulation used in the emission unit.

**CAUTION:** If the same formulation ① or pure organic compound is used in more than one emission unit, a separate AP-5 form is required for each emission unit in which the formulation or pure organic compound is used.

NTIP 🎤

If you obtained a plan approval for the emission unit(s) you are reporting on for the first time, you will have received two documents from DEP: a plan approval letter and a copy of the permit application that you submitted to DEP. It will be easier to fill out the Source Registration forms if you refer to those two documents.

1. FACILITY NAME

The name of the facility or plant that is reporting

The name must uniquely identify the facility. If the parent corporation operates more than one facility, the corporate name alone is insufficient.

IF YOUR FACILITY HAS SUBMITTED PREVIOUS SOURCE REGISTRATIONS: You must use the same name that you are reporting on your side-by-side computer printout.

2. EMISSION UNIT NAME OR IDENTIFYING NUMBER The name or number you assigned to the emission unit on the BWP AQ AP-2 for the emission unit in which this substance is used

3. PROCESS TYPE

A brief description of the process and the types of activities in which the raw material is used USE THE SAME DESCRIPTION AS YOU PROVIDED ON THE BWP AQ AP-2 FOR THE EMISSION UNIT IN WHICH THIS SUBSTANCE IS USED.

Include the SCC Code.

4. AMOUNT OF RAW MATERIAL PROCESSED

The total amount of the formulation ① or organic compound used in the emission unit during the calendar year being reported, and the units of measurement (e.g., square feet, pounds, etc.)

NOTE FOR OUESTIONS #5-#9

NOTE: Questions #5 - #9 ONLY apply to formulations ①.

If YOU ARE USING THE ORGANIC MATERIAL YOU ARE REPORTING TO MANUFACTURE FORMULATIONS ① OR OTHER ORGANIC COMPOUNDS: SKIP TO QUESTION #10.

IF YOU ARE USING AN ORGANIC MATERIAL AS A SOLVENT THINNER TO THIN THE FORMULATION YOU ARE REPORTING ON THIS FORM, OR TO CLEAN THE FORMULATION REPORTED ON THIS FORM FROM PRODUCTION EQUIPMENT: REPORT THE USE OF THAT SOLVENT THINNER ON QUESTION 10 OF THIS FORM. DO NOT REPORT INFORMATION ABOUT THE SOLVENT THINNER ON QUESTIONS #5-#9.

# 5. NAME OF THE FORMULATION CONTAINING THE LIQUID ORGANIC COMPOUND

ONLY ANSWER FOR FORMULATIONS ① *USED* IN THE EMISSION UNIT. (Do not answer for organic compounds used to manufacture chemicals, manufacture formulations, or as solvent thinners.)

The name that clearly identifies the particular formulation being reported on

Use the same name that is on storage containers, Material Safety Data Sheets (MSDS)①, or purchase orders.

## 6. ANNUAL USAGE OF THE FORMULATION

ONLY ANSWER FOR FORMULATIONS USED IN THE EMISSION UNIT. (Do not answer for organic compounds used to manufacture chemicals, manufacture formulations, or as solvent thinners.)

The gallons of the formulation used during the calendar year being reported

Calculate this number as follows:

[Beginning of year inventory] + [purchases] - [end of year inventory].

## 7. DENSITY OF FORMULATION

ONLY ANSWER FOR FORMULATIONS USED IN THE EMISSION UNIT. (Do not answer for organic compounds used to manufacture chemicals, manufacture formulations, or as solvent thinners.)

The density, in pounds per gallon

**TIP:** The density of the formulation can be found on the MSDS⊕ sheet for the formulation⊕.

# 8. TOTAL WEIGHT PERCENTAGE OF ORGANIC IN FORMULATION

ONLY ANSWER FOR FORMULATIONS ① *USED* IN THE EMISSION UNIT. (Do not answer for organic compounds used to manufacture chemicals, manufacture formulations, or as solvent thinners.)

Total weight percentage of:

- VOCs in the formulation
- HOCs in the formulation
- HYCs in the formulation
- ✓ Calculate the weight percentage for each category by adding the weight percent of each individual chemical in the organic compound that is in the category.
- ✓ Determine the weight percentage separately for each category of organic compound.

TIP: The MSDS① provided by your supplier will list the individual chemicals in the formulation.

**NOTE:** Some formulations will contain a mixture of VOCs, HOCs, and/or HYCs. Others will just contain one of the categories.

**CAUTION:** Do not confuse WEIGHT percentage with VOLUME percentage. WEIGHT percentage is calculated as follows:

 $100~{\rm X}$  (The WEIGHT of the HOCs, VOCs or HYCs in the formulation) / (the total WEIGHT of the formulation).

9. NAME AND
WEIGHT
PERCENTAGE OF
LIQUID ORGANIC
COMPONENTS IN
COMPOUND

ONLY ANSWER FOR FORMULATIONS (\*) *USED* IN THE EMISSION UNIT. (Do not answer for organic compounds used to manufacture chemicals, manufacture formulations, or as solvent thinners.)

List the weight percentage and chemical name (e.g., toluene) of each VOC compound, each HOC compound and each HYC compound contained in the formulation. Attach a separate sheet, if necessary.

#### 10. SOLVENT THINNER ADDED

#### THIS QUESTION ONLY APPLIES TO ORGANIC COMPOUNDS USED:

- ✓ To *manufacture* new chemicals: One BWP AQ AP-5 is required for EACH organic compound used in the emission unit
- ✓ To prepare or make formulations such as inks, paints or other coatings: One BWP AQ AP-5 is required for EACH organic compound used in the emission unit
- ✓ As solvent thinners for formulations or to clean processing equipment: Include ALL solvent thinners used with the specific formulation being reported on this form in this question.

Chemical name(s)

The specific organic compound(s) by chemical name

Annual usage

The gallons of the solvent thinner used during the calendar year being reported

Density

The density, in pounds per gallon

This information can be found on the MSDS sheet.

CAS number(s)

For pure substances only: Chemical Abstract Service (CAS) number(s) from the MSDS

## 11. OFF SITE DISPOSAL

THIS QUESTION APPLIES TO ALL ORGANIC MATERIALS USED.

Provide the information for each category of organic compound (HOC, HYC, VOC).

Amount of the Organic Compound disposed (pounds per year) The total weight of all waste streams that contain the formulation shipped offsite for disposal

TIP: Obtain this number from hazardous waste manifests or bills of lading filled out for each waste shipment.

CAUTION: This number must be verifiable.

Percent VOC/HOC/HYC by weight The percent by weight of VOC/HOC/and/or HYC in the WASTE being shipped offsite for disposal

Weight of disposed HOC/VOC/HYC (pounds per year)

[Amount of the formulation shipped offsite for disposal each year] X [Weight percentage of the HOC/VOC/HYC in the waste stream]

Disposal method

Type of treatment used (e.g., recycling, incineration, landfill etc.)

#### 12. VOC/HOC/HYC COMBINED IN PRODUCT

The weight of VOC/HOC (in pounds per year) that was NOT emitted to the ambient air at the facility because it was:

#### **EITHER**

1. Chemically converted to another substance during production,

OR

2. Physically combined with AND shipped out with the product.

**NOTE FOR TURA FILERS:** TURA calls use #2 "shipped in product".

NOTE: VOC/HOC/HYCs are only combined in the product at facilities that manufacture coatings or chemicals that are shipped offsite for sale to or use at another facility. Organic compounds that are contained in coatings that are APPLIED at a facility are emitted to the ambient air as the coating dries, and unless controlled with air pollution control equipment, must be reported as emissions from the facility.

#### 13. EMISSION CONTROL OF VOC/HOC/HYC

### Type of add-on control

The name and the code number (from Appendix D) for the type of air pollution control equipment used to control air contaminants from this emission unit.

## **OVERALL Control efficiency (percent)**

The "OVERALL EFFICIENCY" of the emission control device equals:

(CAPTURE EFFICIENCY of the control device) X (CONTROL EFFICIENCY of the control device)

The *Capture Efficiency* is the percentage of the emissions that reach the air pollution control unit.

The *Control Efficiency* is the percentage of the emissions that are removed from the air stream by the APCE.

- ✓ IF YOU HAVE STACK-TESTING DATA ON CONTROL EFFICIENCY: Use that information.
- ✓ IF YOU DO NOT HAVE STACK-TESTING DATA: Use the manufacturer's suggested control efficiency. This is usually expressed as a range of percentages (e.g., 90%-97%). Use the upper end of the range.

## Weight of VOC/HOC/HYC controlled

The amount of the VOC, HOC, or HYC that is controlled in the treatment unit.

Calculate this separately for HOC, VOC, and HYC:

Please see Appendix C: Example Calculations.

**EXECAUTION:** The weight of VOC/HOC/HYC recovered or reclaimed onsite and reintroduced into process CANNOT be claimed as amount controlled unless the amount of the VOC/HOC/HYC recovered or reclaimed onsite was also included in the "annual usage" of the formulation (Question #6) or in the "annual usage" of the solvent thinner (Question #10).

#### 14. VOC/HOC/HYC EMISSIONS

Estimate Actual and Potential VOCs, HOCs, and HYCs emissions

#### **Actual Emissions**

The actual emissions for the calendar year being reported

Please see the Appendix C: Example Calculations.

TIP FOR VOCS USED IN FORMULATIONS OR SOLVENT THINNERS: The emissions of VOCs generally equal the amount of the VOC in the material used during the year, less that which was controlled in an APCE or disposed of offsite. In some cases, emission factors found in EPA's AP-42 (http://www.epa.gov/ttn/chief) can be used to estimate actual emissions.

CAUTION: The AP-42 emission factors are generic. Therefore they are NOT appropriate for facilities that are subject to certain BACT (Best Available Control Technology) requirements or RACT (Reasonably Available Control Technology) requirements such as NO<sub>X</sub> RACT for boilers. Facilities subject to RACT or BACT must use the emission factors determined through stack testing or the permitting process because AP-42 will overstate emissions.

CAUTION: Save these calculations, you will need to submit them with your BWP AQ AP-6 Form.

#### **Potential Emissions**

Potential emissions ① are the maximum allowable emissions under the terms of the applicable plan approval, or, if no plan approval is required, under the applicable regulations.

Please see the APPENDIX C Example Calculations.

**EXECAUTION:** Pay CLOSE attention to the potential emissions calculations, because potential emissions help to define the regulatory requirements to which your facility is subject.

For example,

- ✓ For example, if your facility-wide potential emissions exceed the major source thresholds ⑤ for any air contaminant including HAPs ⑥, you are required to obtain an air operating permit pursuant to 310 CMR 7 Appendix C, or to restrict your emissions through a federally enforceable permit (RES) pursuant to (310 CMR 7.02(9)). Contact your DEP regional office if you exceed a major source threshold and you have not filed an application for an air operating permit or a RES. The names and addresses of the Regional Offices are listed in Appendix F.
- ✓ Similarly, if your potential emissions of Hazardous Air Pollutants ⊕ (HAPS) equal to or greater than the applicable Maximum Achievable Control Technology (MACT) standard threshold (for most standards this is a major source threshold in 40 CFR Part 63 as of the substantive compliance date ⊕ for that standard, EPA policy states that your facility would NOT be allowed to restrict your potential emissions below the applicable MACT threshold. Thus, according to EPA policy, unless your facility restricts its potential emissions to under the threshold BEFORE the substantive compliance date, your facility would be required to comply with the MACT standard. Furthermore, as a consequence of being subject to a MACT standard, your facility would also be required to obtain an air operating permit, pursuant to 310 CMR 7 Appendix C. The list of MACT standards and their substantive compliance dates can be found in Appendix E.

**CAUTION:** Save these calculations, you will need to submit them with your BWP AQ AP-6 Form.

#### **Permitted Emissions**

Maximum annual emissions allowed pursuant to your permit or plan approval

This question only applies if this emission unit is subject to a plan approval or permit that restricts operations or emissions. If you hold such a plan approval or permit, permitted emissions equal potential emissions.

#### 15. REMARKS

Area for any comments about the above information

## 16. LIST NAME AND ADDRESS

Companies from whom you purchase, or with whom you contract to dispose or recover VOC/HOC/HYC formulations

#### **B.** CERTIFICATION

Signature Of Responsible Official, Signed Under The Pains And Penalties Of Perjury This Certification statement must be reviewed and signed under the pains and penalties of perjury by a responsible official at the location. If an agent has been designated to fill out this form, the responsible official must review the forms and sign the certification statement.

CAUTION: In order to be considered a "responsible official ①" an individual working at the facility must meet the criteria listed in Appendix A: Definitions.

**Print Name** The responsible official's name

**Title** The responsible official's title

**Date** Date the responsible official signed the form



#### JANE SWIFT Acting Governor

## COMMONWEALTH OF MASSACHUSETTS EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS

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ONE WINTER STREET, BOSTON, MA 02108 617-292-5500

BOB DURAND Secretary LAUREN A. LISS Commissioner

#### Section 2.8: BWP AQ AP-6 Solvent Data Registration Form Instructions

#### INTRODUCTION

This form presents the total actual and potential emissions of VOCs, HOCs, and HYCs at the facility from non-combustion related processes for the calendar year being reported.

## WHEN IS THIS FORM APPLICABLE?

THIS FORM IS APPLICABLE TO ALL FACILITIES THAT ARE SUBMITTING THEIR FIRST SOURCE REGISTRATION.

Repeat reporters do not have to submit this form, unless they are reporting VOC, HOC, or HYC process emissions for the first time.

HOW MANY VERSIONS OF THIS FORM ARE REQUIRED? Submit one form for the whole facility.

#### **FACILITY NAME**

The name of the facility or plant that is reporting

The name must uniquely identify the facility. If the parent corporation operates more than one facility, the corporate name alone is insufficient.

IF YOUR FACILITY HAS SUBMITTED PREVIOUS SOURCE REGISTRATIONS: You must use the same name that you are reporting on your side-by-side computer printout.

### 1. TOTAL ACTUAL VOC EMISSIONS

The sum of all actual VOC emissions from each BWP AQ AP-5 for each Emission Unit Attach the calculations for each BWP AQ AP-5.

**NOTE:** Do not include combustion related VOC emissions.

## 2. TOTAL ACTUAL HOC EMISSIONS

The sum of all actual HOC emissions from each BWP AQ AP-5 for each emission unit Attach the calculations for each AP-5.

## 3. TOTAL ACTUAL HYC EMISSIONS

The sum of all actual HYC emissions from each BWP AQ AP-5 for each emission unit Attach the calculations for each BWP AQ AP-5.

# 4. TOTAL POTENTIAL EMISSIONS OF VOCS

Sum of all VOC potential emissions from each BWP AQ AP-5 for each emission unit Attach the calculations for each BWP AQ-AP-5.

**CAUTION:** Pay careful attention to the results of this calculation. If your facility-wide potential emissions of VOCs equal to or greater than 50 tons per year, your facility is a major source for VOCs and is required to apply for an air operating permit pursuant to 310 CMR 7 Appendix C or a RES that restricts your potential to emit, pursuant to 310 CMR 7.02(9). Contact your DEP regional office if you exceed the facility-wide threshold for VOCs and you do NOT have the required permits.

# 5. TOTAL POTENTIAL EMISSIONS OF HOCS

Sum of all HOC potential emissions from each BWP AQ AP-5 for each emission unit Attach the calculations for each BWP AQ-AP-5.

# 6. TOTAL POTENTIAL EMISSIONS OF HYCS

Sum of all HYC potential emissions from each BWP AQ AP-5 for each emission unit Attach the calculations for each BWP AQ-AP-5.

#### **B. CERTIFICATION**

Signature Of

This Certification statement must be reviewed and signed under the pains and penalties of perjury

Responsible Official, Signed Under The Pains And Penalties Of Perjury by a responsible official at the location. If an agent has been designated to fill out this form, the responsible official must review the forms and sign the certification statement.

CAUTION: In order to be considered a "responsible official ①" an individual working at the facility must meet the criteria listed in Appendix A: Definitions.

**Print Name** The responsible official's name

**Title** The responsible official's title

**Date** The date the responsible official signed the form



JANE SWIFT Acting Governor

## COMMONWEALTH OF MASSACHUSETTS EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS

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ONE WINTER STREET, BOSTON, MA 02108 617-292-5500

BOB DURAND Secretary

LAUREN A. LISS Commissioner

#### **Section 2.9: BWP AQ-ES Instructions**

#### **PURPOSE**

This form quantifies average daily VOC and  $NO_X$  emissions for the 153 day Ozone season between May 1 and September  $30^{th}$  of the calendar year being reported for each emission unit at the facility.

## WHEN IS THIS FORM APPLICABLE?

#### IF YOU ARE A FIRST TIME FILER:

- ✓ This form is applicable IF your facility exceeds the reporting threshold for VOCs or NO<sub>X</sub> (25t/yr actual).
- ✓ IF THIS FORM IS NOT APPLICABLE: Write NA on it and submit it with the rest of the package.

#### IF YOUR FACILITY HAS SUBMITTED PREVIOUS SOURCE REGISTRATIONS:

✓ This form is applicable if you submitted a BWP AQ AP-1 or AP-2 on which you reported VOC or NO<sub>X</sub> emissions.

#### HOW MANY VERSIONS OF THIS FORM ARE REQUIERED?

One form is required for EACH BWP AQ AP-1, BWP AQ AP-2, or BWP AQ AP-3 on which you reported  $NO_X$  or VOC emissions.

#### 1. FACILITY NAME

The name of the facility or plant that is reporting

The name must uniquely identify the facility. If the parent corporation operates more than one facility, the corporate name alone is insufficient.

IF YOUR FACILITY HAS SUBMITTED PREVIOUS SOURCE REGISTRATIONS: You must use the same name that you are reporting on your side-by-side computer printout.

#### 2. EMISSION UNIT NAME OR IDENTIFYING NUMBER

The name/identification number the facility uses to uniquely identify the emission unit

Use the same name/identification number you used on the BWP AQ AP-1, AP-2, or AP-3 for this emission unit.

## 3. PROCESS DESCRIPTION

A brief description of process with list of emission unit used in the process.

Use the description from the AP-2 completed for this emission unit.

#### 4. OZONE SEASON AVERAGE DAILY OPERATIONS

The average operating rate and average hours operated per day for the for the 153 day Ozone Season between May 1- September 30

## Units (square feet, pounds, tons

Units used to measure output from the emission unit

#### Average Ozone Season daily process rate

The average number of units produced in this emission unit per hour during the hours the emission unit operated during the ozone season

(total units produced during the ozone season) / (total hours operated during the ozone season)

## Average hours operated per day

The average hours the emission unit operated per day during the 153 day ozone season

(total hours operated during ozone season) / (153 days)

#### 5. COMMENTS

Any additional information you think may be helpful

### 6. EMISSION FACTORS

### **Emission Method Code**

Select one of the following to indicate method of calculation used to prepare the AP forms:

- 1 Source test measurement
- 2 Material balance
- 3 EPA AIRS emission factors (computer calculated)
- 4 Engineering Judgment
- 5 User supplied

#### **Emission Factor**

The emission factors for NO<sub>X</sub> and VOC used to estimate typical ozone season day emissions

These factors are available at the U.S. EPA web site (<a href="http://www.epa.gov/ttn/chief">http://www.epa.gov/ttn/chief</a>).

The AP-42 emission factors are generic. Therefore they are NOT appropriate for facilities that are subject to certain BACT (Best Available Control Technology) requirements or RACT (Reasonably Available Control Technology) requirements such as NO<sub>X</sub> RACT for boilers. Facilities subject to RACT or BACT must use the emission factors determined through stack testing or the permitting process because AP-42 will overstate emissions.

Units in which the emission factors for NO<sub>X</sub> and VOC are expressed (e.g., Lbs. / MBTU)

TYPICAL OZONE SEASON DAY EMISSIONS IN POUNDS PER DAY [Total hours operated per day during the ozone season] X [average operating rate during ozone season] X [emission factor] / 153 days

Report in pounds per day.

**VOC Emissions** Use the calculation methodology described above.

**NO**<sub>X</sub> **Emissions** Use the calculation methodology described above.

#### **B.** CERTIFICATION

Signature Of Responsible Official, Signed Under The Pains And Penalties Of Perjury This Certification statement must be reviewed and signed under the pains and penalties of perjury by a responsible official at the location. If an agent has been designated to fill out this form, the responsible official must review the forms and sign the certification statement.

CAUTION: In order to be considered a "responsible official ①" an individual working at the facility must meet the criteria listed in Appendix A: Definitions.

**Print Name** The responsible official's name

**Title** The responsible official's title

**Date** Date the responsible official signed the form



JANE SWIFT

Acting Governor

# COMMONWEALTH OF MASSACHUSETTS EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS

#### DEPARTMENT OF ENVIRONMENTAL PROTECTION

ONE WINTER STREET, BOSTON, MA 02108 617-292-5500

BOB DURAND Secretary

LAUREN A. LISS Commissioner

## Section 2.10: BWP AQ CAA List of Hazardous Air Pollutants for Source Registration Instructions

INTRODUCTION	This form describes actual and potential emissions of Clean Air Act "Hazardous Air Pollutants" during the calendar year being reported.	
WHEN IS THIS FORM APPLICABLE?	THIS FORM IS APPLICABLE to ALL FACILITIES.  **CAUTION: This form applies to ALL facilities that have submitted previous source registrations as well as ALL facilities submitting their first source registration.	
HOW MANY VERSIONS OF THIS FORM ARE REQUIRED?	Submit one form for the whole facility.	
SEISS ID (UPPER RIGHT CORNER)	FOR FACILITIES THAT HAVE SUBMITTED PREVIOUS SOURCE REGISTRATIONS:  ✓ Write the SSEIS ID for your facility.  FOR FACILITIES SUBMITTING THEIR FIRST SOURCE REGISTRATION:  ✓ Write the name of the facility as it appears on the other forms you are submitting.	

PLEASE INDICATE WHICH CHEMICALS ARE USED BY CHECKING THE APPROPRIATE BOX Check the appropriate boxes for each chemical on the List of Chemicals (pages 1 and 2 of the form) that you used and/or emitted during the calendar year being reported.

To determine whether or not you use a particular chemical refer to the MSDS sheet that accompanied each formulation or chemical compound that your facility purchased last year.

1. DOES THE
FACILITY HAVE
THE POTENTIAL
TO EMIT 10 TONS
PER YEAR OF
ANY SINGLE
LISTED
HAZARDOUS AIR
POLLUTANT?

Check YES or NO as appropriate.

IF YES: Write the chemical name of the HAP in the space provided.

Potential emissions ① are the maximum allowable emissions under the terms of the applicable plan approval, or, if no plan approval is required, under the applicable regulations.

See APPENDIX C: Example Calculations.

TIP: In some cases emission factors found in EPA's AP-42 (<a href="http://www.epa.gov/ttn/chief">http://www.epa.gov/ttn/chief</a>) can be used to calculate potential emissions.

The AP-42 emission factors are generic. Therefore they are NOT appropriate for facilities that are subject to certain BACT (Best Available Control Technology) requirements or RACT (Reasonably Available Control Technology) requirements such as NO<sub>X</sub> RACT for boilers. Facilities subject to RACT or BACT must use the emission factors determined through stack testing or the permitting process because AP-42 will overstate emissions.

CAUTION: Pay CLOSE attention to the "potential emissions ©". If your facility has the potential to emit equal to or greater than 10 TONS PER YEAR OF ANY ONE HAP, it is a "major facility" and you are required to obtain an air operating permit pursuant to 310 CMR 7 appendix C, or obtain an operating restriction (RES) pursuant to 310 CMR 7.02(9). Contact your DEP regional office if you exceed the threshold and have not submitted a application for an operating permit or an RES. Appendix F lists the phone numbers and addresses of the regional offices.

Similarly, if your potential emissions of Hazardous Air Pollutants (HAPS) equal to or greater than the applicable Maximum Achievable Control Technology (MACT) standard threshold (for most standards this is a major source threshold) in 40 CFR Part 63 as of the substantive compliance date for that standard, EPA policy states that your facility would NOT be allowed to restrict your potential emissions below the applicable MACT threshold. Thus, according to EPA policy, unless your facility restricts its potential emissions to under the threshold BEFORE the substantive compliance date, your facility would be required to comply with the MACT standard. Furthermore, as a consequence of being subject to a MACT standard, your facility would also be required to obtain an air operating permit, pursuant to 310 CMR 7 Appendix C. The list of MACT standards and their substantive compliance dates can be found in Appendix E.

2. DOES THE
FACILITY HAVE
THE POTENTIAL
TO EMIT 25 TONS
PER YEAR OF
ANY
COMBINATION
OF LISTED
HAZARDOUS AIR
POLLUTANTS?

Check YES or NO as appropriate.

Potential emissions ① are the maximum allowable emissions under the terms of the applicable plan approval, or, if no plan approval is required, under the applicable regulations.

See APPENDIX C for example calculations.

CAUTION: Pay CLOSE attention to the "potential emissions". If your facility has the potential to emit equal to or greater than 25 TONS PER YEAR OF ANY COMBINATION OF HAPS it is a "major facility" and you are required to obtain an air operating permit pursuant to 310 CMR 7 Appendix C, or obtain a plan approval that restricts your potential to emit. Contact your regional office if you exceed the threshold and you have not submitted an application for an operating permit or RES.

3. IF YOU
ANSWERED YES
TO QUESTIONS 1
OR 2

IF your facility has the potential to emit equal to or greater than 10 tons per year of any single HAP or equal to or greater than 25 tons per year of any combination of HAPs, answer the following questions.

**Total HAPs emitted** 

Actual emissions of all HAPs during the calendar year being reported, in tons per year.

See APPENDIX C: Example Calculations.

TIP: For VOCs, HYCs, or HOCs that are used in formulations or to clean equipment or parts the amount used in the year is equal to actual emissions, since these substances all volatize on site.

TIP: In many cases the emission factors found in EPA's AP-42 (<a href="http://www.epa.gov/ttn/chief">http://www.epa.gov/ttn/chief</a>) can be used to calculate actual emissions.

The AP-42 emission factors are generic. Therefore they are NOT appropriate for facilities that are subject to certain BACT (Best Available Control Technology) requirements or RACT (Reasonably Available Control Technology) requirements such as NO<sub>X</sub> RACT for boilers. Facilities subject to RACT or BACT must use the emission factors determined through stack testing or the permitting process because AP-42 will overstate emissions.

Highest Single HAP emitted at the facility

The chemical name, CAS number and actual emissions of that HAP for the HAP which is emitted in the greatest amount during the calendar year being reported.

Are the HAPs being emitted from your facility as VOCS, Particulates, or Both? Answer YES or NO as appropriate.

#### **B. CERTIFICATION**

Signature Of Responsible Official, Signed Under The Pains And Penalties Of Perjury This Certification statement must be reviewed and signed under the pains and penalties of perjury by a responsible official at the location. If an agent has been designated to fill out this form, the responsible official must review the forms and sign the certification statement.

CAUTION: In order to be considered a "responsible official ①" an individual working at the facility must meet the criteria listed in Appendix A: Definitions.

**Print Name** The responsible official's name

**Title** The responsible official's title

**Date** The date the responsible official signed the form



JANE SWIFT

Acting Governor

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## PART 3: INSTRUCTIONS FOR THE "SIDE-BY-SIDE" COMPUTER PRINTOUT

#### Section 3.1: General Instructions For The "Side-by-Side" Report

WHAT IS THE PURPOSE OF THE COMPUTER PRINTOUT The "Side-by-Side" Computer Printout is the basic reporting form for facilities that have previously submitted source registrations. It displays the information from your most recent source registration stored in DEP's Stationary Source Emissions Inventory System (SSEIS).

In order to report:

- ✓ Update or correct the information on the "Side-by-Side" computer printout.
- ✓ Complete a BWP AQ CAA form.

Complete the appropriate BWP AQ- AP form for new production equipment, fuels, or formulations containing organic compounds that have been added or removed from your facility since your last source registration.

CAUTION: Certain changes in formulations, fuel, or equipment require a plan approval from DEP. If you did not obtain a plan approval and think you may need one, contact your DEP Regional Office. The telephone numbers and addresses of the regional offices are listed in Appendix F.

HOW TO USE THE SIDE-BY-SIDE COMPUTER PRINT-OUT

Each page of the "Side-by-Side" computer printout has two columns. The left column contains each of the required data elements, and the most up to date information in SSEIS. The right column lists each required data element followed by a blank space. Put updated information and corrections in the blank spaces in the right hand column.

#### ORGANIZATION OF THE DATA IN THE COMPUTER PRINTOUT

It is important to realize that the data you submitted on your previous years' BWP –AQ forms is organized on the computer print out.

Data from the individual BWP – AQ forms is aggregated for the facility as a whole:

- ✓ Individual "emission units" are called "points" assigned a unique number, and are assigned to "stacks" •
- ✓ Fuel, formulations that contain organic compounds, and other raw materials are called "segments" ⊕, assigned a number, and are assigned to each emission unit (or "point").
- ✓ Information is presented at the facility level, "point" level, and "stack" level.

### What is "Facility level" information?

Aggregate information for the facility as a whole

#### What is a "Stack"

A stack is the place where the emissions are released to ambient air. This can be either a stack or a vent.

- Each facility has at least one stack and may have more than one stack.
- Descriptive information about each true *stack* has been taken from the BWP AQ AP 1,2 or 3 form for the emission unit that discharges to it.

NOTE: Because DEP does not require facilities to submit descriptive information about *vents*, no descriptive information about vents will be displayed on the computer print out.

#### What is a "point"?

A "point" is an "emission unit". An emission unit is a step in the production of a product (a process) that results in the release of air contaminants. Emission units are generally subject to regulatory requirements or permit or plan approval conditions (e.g., a degreasing unit, a coating unit, a drying unit, a combustion unit, etc.).

- The information about each "point" originally came from a BWP AQ AP-1, 2, 3, or 4 submitted by your facility.
- Every "point" is associated with a specific "stack". However, a "stack" can have more than one "points" associated with it.
- SSEIS automatically assigns a number to each "point". See "Numbering Stacks, Points, and Segments" in Appendix A: Definitions.
- Facilities have the option of assigning their own unique name/number to each "point". This number does not change from year to year.
- DEP has assigned each "point" to a stack, based on information you submitted on your BWP AQ AP-1, 2, 3, or 4.

## What is a "Segment"?

The "segment" is the fuel, formulation ① containing an organic compound, or other raw material that is used in the emission unit and results in the release of an air contaminant.

- This information originally comes from the information submitted on the BWP AQ AP-1 for fuel, the BWP AQ AP-2 for other raw materials, or the BWP AQ AP-5 for organic compounds
- Each segment is associated with a specific "point" (emission unit). However, a "point" can have more than one segment.
- SSEIS automatically assigns a number to each segment.

#### ORGANIZATION OF THE COMPUTER PRINTOUT

The print out has 5 sections. Each section is paginated separately.

SECTION	CONTENTS	
Section 1: Emission Statement – Plant Overview	<ul> <li>Facility level form</li> <li>Displays basic identifying information about the facility and total emissions</li> </ul>	
Section 2: Plant Overview	<ul> <li>Facility level form</li> <li>Displays each segment  with its associated "point" (emission unit) and "stack "and the number of any plan approval or regulatory cite for any applicable regulatory requirement</li> </ul>	
Section 3: Emission Statement – Stack Information	<ul> <li>Facility level form</li> <li>Lists each of the facility's "stacks" and the "points" associated with each "stack". If the "stack" is a true stack rather than a vent, this section also contains a physical description of the "stack"</li> </ul>	
Section 4: Emission Statement – "Point" Information	<ul> <li>"Point" (emission unit) level form</li> <li>One form for each "point"</li> <li>Displays descriptive information about the emission unit including process type, operating rates, raw materials, and emissions</li> </ul>	
Section 5: Emission Statement- Segment Information	<ul> <li>"Segment" ① level form</li> <li>One form for each "segment"</li> <li>Displays descriptive information about the substance used in the emission unit, air emissions related to the use of that substance, and control equipment efficiency</li> </ul>	

REPORTING CHANGES IN EQUIPMENT AND RAW MATERIALS Report new equipment, fuel, formulations and other raw materials on the appropriate BWP AQ Source Registration form.

## Reporting Added Equipment

Report new equipment on the appropriate BWP AQ AP Emission Unit form, as follows.

If your facility installed a new	Submit a new
COMBUSTION UNIT that was subject to a regulatory requirement or the requirement to obtain a plan approval	BWP AQ AP-1 Emission Unit – Fuel Utilization Equipment
PROCESS EQUIPMENT that was subject to a regulatory requirement or the requirement to obtain a plan approval	BWP AQ AP-2 Emission Unit – Process Equipment
INCINERATOR that was subject to a regulatory requirement or the requirement to obtain a plan approval	BWP AQ AP-3 Emission Unit – Incinerator
ORGANIC MATERIAL STORAGE EQUIPMENT with a capacity greater than 500 gallons	BWP AQ AP-4 Emission Unit – Organic Material Storage

## Reporting Replacement Equipment

You do not need to report on new equipment or stacks that replaces existing equipment as long as the replacement equipment did not increase capacity or change the operations.

## Reporting New Organic Compounds

If your facility is using a new formulation that contains organic compounds submit a new BWP AQ AP-5 Organic Compounds form.

## Reporting a change in fuel type or characteristic

IF YOU HAVE CHANGED THE TYPE OF FUEL YOU ARE USING (e.g., changing from oil to gas or coal): Submit a new BWP AQ AP-1 Emission Unit -- Fuel Utilization form.

regional office if you think you need a plan approval. Appendix F lists the telephone numbers and addresses of DEP's regional offices.

IF YOU HAVE CHANGED THE SULFUR OR ASH CONTENT OF YOUR FUEL: Update the descriptive information on the *Emission Statement-Segment Information* section of the "Side-by-Side" computer printout.

Reporting the elimination of an emission unit ("point"), chemical or fuel (segment), or stack

IF YOU HAVE ELIMINATED AN EMISSION UNIT, CHEMICAL OR FUEL, OR STACK SINCE YOUR LAST REPORT:

- 1. Cross off the stack, "point", or segment on the *Plant Overview Section of the Computer Printout*
- 2. Cross the "stack", "point", or "segment" off the appropriate *Stack Information, Point Information and/or Segment Information Section(s)* of the "Side-by-Side" computer printout.

#### CHANGING THE ASSIGNMENTS OF POINTS TO STACKS OR SEGMENTS TO POINTS

Under certain circumstances (described below) you may reassign points to different stacks, or segments to different points, or you may consolidate points.

# Correcting the assignment of a segment to a "point" or a "point" to a stack

Make the corrections on the plant overview form, as well as the appropriate *Stack Information*, *Point Information or Segment Information Section(s)* of the "Side-by-Side" Report.

# When may I reconfigure or consolidate the "points" (emission units)?

You may consolidate one or more individual "points" into one "point" IF:

- ✓ You have one or more different "points" (emission units) that consist of similar pieces of equipment used interchangeably to make the same product
- ✓ You have several space heaters or internal combustion engines that each have an input capacity less than 10 MBTU per hour.

## Reporting the reconfiguration or consolidation

Report the reconfiguration by making the appropriate changes on the *Plant Overview, Stack,* "*Point*", and Segments section(s) of the Computer Printouts

TIP ON KEEPING TRACK OF STACKS, POINTS, AND SEGMENTS ON THE "SIDE-BY-SIDE REPORT" FROM ONE YEAR TO THE NEXT TIP: Because of the way SSEIS is designed, the numbers DEP assigns to the stacks, "points", or segments may change in the subsequent year's computer print out if you add, delete, combine stacks, points or segments, or if you change the way points are assigned to stacks, or segments are assigned to points.

It will be easier to understand the subsequent year's Side-by-Side Report IF you:

✓ Assign (if you have not already done so) your own identifying name or number to each stack in the "SOURCE ID" field of the Stack Information Section of the "Side-by-Side Report", to each "point" in the "COMMENTS" field of the Point Information Section of the "Side-by-Side Report", and to each "segment" in the "SEGMENT DESCRIPTION" field of the Segment Information Section of the "Side-by-Side Report".

AND

✓ Retain a copy of the source registration you submit to DEP.

The system for "Numbering Stacks, Points, and Segments" is explained in APPENDIX A: DEFINITIONS.

#### **Section 3.2: Emission Statement – Plant Information**

OVERALL
DESCRIPTION

This form provides summary information about the facility and its emissions for the calendar year being reported. There is one form for the entire facility.

YEAR OF RECORD

The year the source registration was last updated

DO NOT CHANGE.

DEP IDENTIFICATION

**CODES** 

Codes DEP uses to locate and identify the facility

DO NOT CHANGE.

**LCON** The code for the regional office to which your facility is assigned

AQCR The code for the federal air pollution control region in which your facility is located

PLANT The SSEIS Identification number DEP has assigned to your facility

**CONTACT** The name of the individual who should be contacted for further information about the form

**NOTE:** This person must be located at the facility.

**PHONE** The phone number of the individual who should be contacted for further information about the form

This person must be located at the facility.

**NAME** The name of the facility or plant that is reporting

The name must uniquely identify the facility. If the parent corporation operates more than one facility,

the corporate name alone is insufficient.

FACILITY ADDRESS The street address (as opposed to the mailing address) of the facility

MAILING ADDRESS The address to which future Source Registration Forms should be sent

This may be either a corporate office or the facility mailing address, but it may not be a consultant to

the facility.

#### UTM HORIZONTAL

Universal Transverse Mercator horizontal coordinate – the "northerly" coordinate

APPENDIX C: CALCULATIONS explains how to determine your UTM codes from a USGS Topographic Map.

#### **UTM VERTICAL**

Universal Transverse Mercator vertical coordinate - the "easterly" coordinate

APPENDIX C: CALCULATIONS explains how to determine your UTM codes from a USGS Topographic Map.

#### **NAICS**

A six-digit code classifying the facility by the types of products produced

Use the SIX DIGIT codes as submitted on your facility's Federal IRS forms.

#### NUMBER OF EMPLOYEES

The maximum number of employees that worked at the facility during the day during the calendar year being reported on

Exclude from this count those employees that met BOTH of the following conditions:

✓ the employee worked less than 17 hours a week

AND

✓ the employee worked less than 20 weeks per year.

Include in your count employees that only met one of the preceding conditions.

#### **SOURCE CLASS**

#### DO NOT CHANGE THIS CODE.

DEP assigns this code on the basis of the quantity of the facility's POTENTIAL emissions.

Please see the DEFINITIONS AND CALCULATIONS section for a definition of POTENTIAL emissions

A (major facility)

A facility that has

#### EITHER:

✓ 100 or more tons per year POTENTIAL emissions of TSP, OR CO, OR SO<sub>2</sub>

OR

✓ 50 or more tons per year POTENTIAL emissions 1 of VOC OR NOX

OR

Is equal to or greater then 10 tons per year for any HAP or equal to or greater than 25 tons per year total for HAPS

B (minor facility)

A facility that is not a major facility AND has

EITHER:

✓ <100 tons per year POTENTIAL emissions of TSP OR SO<sub>2</sub> OR CO

OR

✓ <50 tons per year emissions of VOC OR NO<sub>X</sub>

#### **COMMENTS**

General information describing the facility

#### PLANT POLLUTION TOTALS (TONS/YEAR)

The Actual Emissions ①, Potential Emissions ①, and Permitted Emissions ① of each air contaminant from your facility for the calendar year being reported. The amounts are expressed in tons per year, rounded to the nearest TON.

The "criteria pollutants" (TSP, SO<sub>2</sub>, NO<sub>X</sub>, VOC, CO, PM10, PM2.5, NH3) are all listed. The column will have the number "0" in it IF:

✓ your facility had no emissions of the contaminant,

#### OR IF

the sum of the emissions from all emission units was less than 1000 pounds (0.5 ton). (This is because SSEIS automatically totals emissions from each emission unit, and rounds to the nearest ton.)

Pollutants will be listed in the "OTHER" column if your facility is required to report on any air contaminants in addition to the "criteria pollutants".

### ACTUAL EMISSIONS

The actual emissions for the entire facility during the calendar year being reported

The sum of all emissions from each emission unit ("points") at the facility is reported here for each pollutant. Complete this section AFTER you have calculated the emissions from each emission unit ("point").

Example calculations can be found in APPENDIX C.

TIP: In many cases emission factors found in EPA's AP-42 (<a href="http://www.epa.gov/ttn/chief">http://www.epa.gov/ttn/chief</a>) can be used to estimate actual emissions.

**CAUTION:** The AP-42 emission factors are generic. Therefore they are NOT appropriate for facilities that are subject to certain BACT (Best Available Control Technology) requirements or RACT (Reasonably Available Control Technology) requirements such as NO<sub>X</sub> RACT for boilers. Facilities subject to RACT or BACT must use the emission factors determined through stack testing or the permitting process because AP-42 will overstate emissions.

#### POTENTIAL EMISSIONS

The maximum allowable emissions under the terms of the applicable plan approval, or, if no plan approval is required, under the applicable regulations

See the APPENDIX C for example calculations.

CAUTION: Pay CLOSE attention to the "potential emissions" calculations, because potential emissions help to define the regulatory requirements to which your facility is subject.

For example,

- ✓ For example, if your facility-wide potential emissions exceed the major source thresholds � for any air contaminant including HAPs ♠, you are required to obtain an air operating permit pursuant to 310 CMR 7 Appendix C, or to restrict your emissions through a federally enforceable permit (RES) pursuant to (310 CMR 7.02(9)). Contact your DEP regional office if you exceed a major source threshold and you have not filed an application for an air operating permit or a RES. The names and addresses of the Regional Offices are listed in Appendix F.
- ✓ Similarly, if your potential emissions of Hazardous Air Pollutants ⊕ (HAPS) is equal to or greater than the applicable Maximum Achievable Control Technology (MACT) standard threshold (for most standards this is a major source threshold) in 40 CFR Part 63 as of the substantive compliance date ⊕ for that standard, EPA policy states that your facility would NOT be allowed to restrict your potential emissions below the applicable MACT threshold. Thus, according to EPA policy, unless your facility restricts its potential emissions to under the threshold BEFORE the substantive compliance date, your facility would be required to comply with the MACT standard. Furthermore, as a consequence of being subject to a MACT standard, your facility would also be required to obtain an air operating permit, pursuant to 310 CMR 7 Appendix C. The list of MACT standards and their substantive compliance dates can be found in Appendix E.

#### Permitted Emissions

Maximum annual emissions allowed for your facility pursuant to your permits or plan approvals

This question only applies if this facility is subject to a plan approval or permit that restricts operations or emissions. If you hold such a plan approval or permit permitted emissions equal potential emissions.

#### **B** Certification

SIGNATURE OF RESPONSIBLE OFFICIAL, UNDER THE PAINS AND PENALTIES OF PERJURY This Certification statement must be reviewed and signed under the pains and penalties of perjury by a responsible official at the location. If an agent has been designated to fill out this form, the responsible official must review the forms and sign the certification statement.

CAUTION: In order to be considered a "responsible official ()" an individual working at the facility must meet the criteria listed in Appendix A: Definitions.

**PRINT NAME** The responsible official's name

**TITLE** The responsible official's title

**DATE** The date the responsible official signed the form.

# Section 3.3: Emission Statement – Plant Overview

# OVERALL DESCRIPTION

This table lists each "stack" (stack or vent where emissions are released to the environment) with its associated "points" (emission units) and "segments" (fuel, or organic material, or other raw material used in the emission unit). There is one form for the entire facility.

NOTE: This Section of the computer print out does not have two columns. Make any necessary corrections below the table.

DEP IDENTIFICATION CODES Codes DEP uses to locate and identify the facility

DO NOT CHANGE.

**AQCR** 

The code for the federal air pollution control region in which your facility is located

**PLANT** 

The SSEIS Identification number DEP has assigned to your facility

# **SOURCE NAME**

The name of the facility or plant that is reporting

The name must uniquely identify the facility. If the parent corporation operates more than one facility, the corporate name alone is insufficient.

# STACK

A "stack" is the vent or stack from which air contaminants are released to the environment.

The numbers in the <STACK> column are the numbers DEP's computer system (SSEIS) has assigned to the "stacks" from which air contaminants from the emission units (the "points") listed in the next column are released to the environment.

It is important to note that the term "stack" includes vents as well as traditional "stacks" or chimneys. DEP has assigned each emission unit at your facility to a particular "stack" on the basis of the information you submitted on your BWP AQ AP emission unit forms. Emission units that discharge to an identifiable "stack" are assigned to that stack. Many emission units' discharge to *vents* rather than stacks. DEP generally aggregates all vents at the facility as one "stack" and assigns all emission units that discharge to vents assigned to that one "stack".

**NOTE:** IT IS NOT NECESSARY FOR YOU TO IDENTIFY EACH VENT AT YOUR FACILITY.

#### **POINT**

A "point" is an emission unit at the facility.

The numbers in the <point> column are the unique identification numbers SSEIS (DEP's computer system) has assigned to each emission unit at the facility.

NOTE: If your facility has completed a BWP AQ CAA form, reporting the use of Hazardous Air Pollutants, some of these HAPS chemicals may be reported back to you in this print-out as the last point (A Dummy Point) on the Plant Overview. A subset of the HAPs have been identified by EPA as Priority Air Toxics (FR-38705 Vol 64 #137 – 07/19/1999). Any of the chemicals previously identified as used by your facility will be listed as segments on the last point (identified as Priority Air Toxic) on your side by side report. This information is for DEP reference only. You do not need to make any changes to this point on the overview page or in the detail section of the report. Priority Air Toxic chemicals will be updated automatically if changes occur on your BWP AQ CAA form. Any changes to chemicals reported on your regular points, should be changed as appropriate.

# **SEGMENT**

The "segment" is the fuel, organic material, or other raw material used in the "point" (emission unit).

The numbers in the <SEGMENT> column are the identification numbers SSEIS has assigned to each "segment" in the "point".

# SEGMENT COMMENTS

The identifying information the *facility* has assigned to the emission unit (the "point") that the "segment" is used with, as well as some information about the fuel, organic material, or other raw material

### YR OF RECORD

The last year a source registration was submitted

# DEP APPROVAL NUMBER

This question applies ONLY to emission units for which a plan approval is required.

This column contains the approval number for the plan approval that allowed the installation of the emission unit/segment. This number is found on the letter sent by DEP that informed you of its approval.

**NOTE:** Some emission units will not have plan approvals because they are "permitted by rule" – installed in accordance with the provisions of 310 CMR 7.03 or 7.02(2), they are below the threshold for which a plan approval or permit is required, or they are "grandfathered".

This question applies to emission units for which a plan approval was not required.

This column contains the citation for the regulation under which the emission unit was installed.

# **Section 3.4: Emission Statement – Stack Information**

# OVERALL DESCRIPTION

This section summarizes descriptive information about each of the facility's "stacks". There is one form for the entire facility.

NOTE: If the "stack" is a vent rather than a stack or chimney, "zero" will be listed in each data field because DEP does not collect any descriptive information about vents. You are not required to supply any descriptive information about vents

The chart is in a Table format. Each "stack" is listed from left to right. The descriptive information for each stack is listed underneath each stack.

DEP IDENTIFICATION CODES Codes DEP uses to locate and identify the facility

DO NOT CHANGE.

**AQCR** 

The code for the federal air pollution control region in which your facility is located

**PLANT** 

The SSEIS Identification number DEP has assigned to your facility

**NAME** 

The name of the facility or plant that is reporting

The name must uniquely identify the facility. If the parent corporation operates more than one facility, the corporate name alone is insufficient.

### STACK NUMBER

A "stack" is the vent or stack from which air contaminants are released to the environment.

The numbers in the  $\langle STACK \rangle$  row are the numbers DEP's computer system (SSEIS) has assigned to the "stacks".

**NOTE:** If you eliminated a stack last year, SSEIS may have assigned the stack a different number this year. How SEISS assigns numbers is explained in "Numbering System for Stacks, Points and Segments" ⊕ in Appendix A: Definitions.

# **SOURCE ID**

The unique identifier the facility has assigned to the "stack"

If this row is empty, facilities may choose to assign an identifier.

TIP: Assigning an identifier will make it easier to keep track of changes at your facility.

# POINTS COMMON

Each emission unit ("point") has been assigned to a "stack". This row contains the identification number for each emission unit ("point") that DEP's computer system (SSEIS) has assigned to that "stack".

Emission units that discharge to an identifiable "stack" are assigned to that stack. Many emission units discharge to vents rather than stacks. Typically DEP aggregates all vents at the facility as one "stack". All emission units that discharge to vents are then assigned to that one "stack".

**NOTE:** IT IS NOT NECESSARY TO IDENTIFY EACH VENT AT YOUR FACILITY.

# **HEIGHT (FT)**

The total height of the stack or chimney

NOTE: Facilities are not required to submit descriptive information about vents. Therefore, there is no descriptive information about vents on the "Side-by-Side" form.

#### **DIAMETER (FT)**

The diameter of the opening of the stack, in feet,

NOTE: Facilities are not required to submit descriptive information about vents. Therefore, there is no descriptive information about vents on the "Side-by-Side" form.

# **EXHAUST (FPS)**

The maximum velocity at which the gasses exit the top of the stack, in feet per second.

**NOTE:** Facilities are not required to submit descriptive information about vents. Therefore, there is no descriptive information about vents on the "Side-by-Side" form.

# **TEMPERATURE**

The maximum temperature of the gasses exiting the top of the stack, in degrees Fahrenheit

NOTE: Facilities are not required to submit descriptive information about vents. Therefore, there is no descriptive information about vents on the "Side-by-Side" form.

# LINING

The material used to construct the stack (e.g., metal or refractory)

NOTE: Facilities are not required to submit descriptive information about vents. Therefore, there is no descriptive information about vents on the "Side-by-Side" form.

### MONITORING

This row is blank. It is a heading for the rows below.

MAKE	The manufacturer of the monitoring equipment attached to the stack
MODEL	The number the manufacturer uses to identify the particular model
MODEL	The number the manufacturer uses to identify the particular model
EMISSION REC	Whether or not the stack has a continuous emission recorder or an opacity monitor installed
	The row has "Y" if the stack is equipped with a recorder or monitor. It is blank if there is no recorder or monitor.
LAST UPDATE	The last year a source registration was submitted

# Section 3.5: Emission Statement – Point Information

# OVERALL DESCRIPTION

This section provides information about emissions from each of the facility's emission units ("points" ①). There is one form for each "point".

The form is organized by the sequential number that DEP's computer system (SSEIS) has assigned to the "point".

Pollutants, some of these HAP Chemicals may be reported back to you in this print-out as the last point (A Dummy Point). A subset of the HAPS have been identified by EPA as Priority Air Toxics (FR-38705 Vol 64 #137 – 07/19/1999). Any of the chemicals previously identified as used by your facility will be listed as segments on the last point (identified – priority Air Toxic). This information is for DEP Reference Only. You do not need to make any changes to these segments. Priority Air Toxic chemicals will be updated automatically if changes occur on your BWP AQ CAA form. Any changes to chemicals reported on your regular points, should be changed as appropriate.

# DEP IDENTIFICATION CODES

Codes DEP uses to locate and identify the facility

DO NOT CHANGE.

LCON

The code for the regional office to which your facility is assigned

**AOCR** 

The code for the federal air pollution control region in which your facility is located

**PLANT** 

The SSEIS Identification number DEP has assigned to your facility

**NAME** 

The name of the facility or plant that is reporting

The name must uniquely identify the facility. If the parent corporation operates more than one facility, the corporate name alone is insufficient.

**POINT** 

The unique ID number SSEIS has assigned to the "point" (emission unit)

NOTE: If your facility added, eliminated or reconfigured "points" on your previous source registration, the ID number DEP assigned to each "point" may have changed. However, the name/Identification number you assigned to the emission unit will NOT have changed, and can be found in the "COMMENT" field. How SEISS assigns numbers is explained in "Numbering System for Stacks, Points and Segments" in Appendix A: Definitions.

# POINT DESCRIPTION

A code DEP assigns that describes the type of emission unit.

B = Boiler, P = Process, I = Incinerator, T = Above ground tank, U = Underground tank, S = Standby generators, G = Cogeneration, O = Other. Other will be explained in the "COMMENTS" field.

**INSTALLATION DATE** The date the emission unit ("point") was installed

#### **RATING**

For boiler points only – numeric indicator of the boiler input capacity before heat transfer.

# **CONTROL** REGULATION

# FOR THOSE EMISSION UNITS/SEGMENTS FOR WHICH A PLAN APPROVAL WAS NOT REQUIRED

This column contains the citation for the regulation under which the emission unit was installed.

**NOTE:** Some emission units will not have plan approvals because they are "permitted by rule" - installed in accordance with the provisions of 310 CMR 7.03 or 7.02(2), they are below the threshold for which a plan approval or permit is required, or they were installed before the effective date of the regulations.

# **QUARTERLY %**

The percentage of output from the emission unit produced during each quarter of the year

 $1^{ST}$ : = Jan 1 – March 30,

 $2^{ND}$  = April 1- June 30,

 $3^{RD} = \text{July 1- September 30},$ 

4<sup>TH</sup> = October 1- December 31

### **OPERATING RATE**

Provide the requested information

✓ for the calendar year being reported

AND

for the period between May 1 and September 30 (ozone season) of the year being reported.

# **ACTUAL HOURS PER** DAY

Average number of hours per day the emission unit was operated each week the emission unit operated during the calendar year being reported, or during the ozone season.

For Annual: (Total hours operated during the calendar year being reported) / (Total days operated during the calendar year)

For Ozone Season: (Total hours operated during the ozone season being reported) / (Total days operated during the ozone season being reported)

# ACTUAL DAYS PER WEEK

Average number of days per week the emission unit was operated each week the emission unit operated during the calendar year being reported

For Annual: (Total days operated during the calendar year being reported) / (Total weeks operated during the calendar year being reported)

For Ozone Season: (Total days operated during the ozone season being reported / Total weeks operated during the ozone season being reported)

# ACTUAL WEEKS PER YEAR

The total number of weeks the facility operated during the calendar year being reported and during the ozone season being reported

# DEP APPROVAL NUMBER

For emission units for which a plan approval was required

The column contains the number from the plan approval or permit that approved the installation of the emission unit/segment. This number is found on the letter sent by DEP that informed you that the unit was approved.

#### **COMMENT**

Name or identification number your facility uses to uniquely identify the "point" (emission unit), the raw materials used in the emission unit, and or other information

If your facility has not assigned a name or identification number to the point you may write one in on the form.

# TOTAL EMISSIONS

Actual Emissions ①, from the emission unit, for each air contaminant emitted for the calendar year being reported. This is the sum of the emissions associated with each "segment" ① used in the emission unit.

Units may be expressed in pounds or tons. Be sure to indicate which units you are using.

TIP: Calculate this number AFTER calculating the emissions related to each "segment" This is the sum of all emissions from each segment in the emission unit for each air contaminant.

Example calculations can be found in Appendix C.

CAUTION: This number should change from year to year.

TIP: In many cases emission factors found in EPA's AP-42 (<a href="http://www.epa.gov/ttn/chief">http://www.epa.gov/ttn/chief</a>) can be used to calculate actual emissions.

The AP-42 emission factors are generic. Therefore they are NOT appropriate for facilities that are subject to certain BACT (Best Available Control Technology) requirements or RACT (Reasonably Available Control Technology) requirements such as NO<sub>X</sub> RACT for boilers. Facilities subject to RACT or BACT must use the emission factors determined through stack testing or the permitting process because AP-42 will overstate emissions.

<b>OZONE</b>	<b>SEASON</b>
DAILY	

Average Daily amount IN POUNDS emitted during the 153 day ozone season (May 1 – September 30)

(Total pounds of VOC emissions during the ozone season) / (153 days)

(Total pounds of  $NO_X$  emissions during the ozone season) / (153 days)

# FOR PROCESS EQUIPMENT ONLY

This question does not apply if the emission unit is either a combustion unit, or an organic material storage tank.

# FINISH MATERIAL

This space is left blank. It is a heading for information about the output from the emission unit.

# Type

Name of output from the emission unit

**CAUTION:** The output is from the emission unit. Only put the name of the finished product from the facility here IF the entire production process has only one emission unit, OR IF this emission unit is the final step in the production process.

# Amount

Total output from the emission unit during the calendar year being reported

# Units

The units used to quantify the amount of the finished product from the emission unit

#### **VOC WGT%**

The average weight percentage of VOCs of all of the formulations and organic compounds used in the emission unit during the calendar year

For example,

If your facility uses 10 pounds of one formulation with a VOC weight percentage of 50% and 5 pounds of a organic compound that is 100% VOCs by weight percentage every hour the emission unit is operated, the average weight percentage would be:

 $([50\% \text{ X} \ 10 \text{ pounds}] + [100\% \text{ X} 5 \text{ pounds}]) / 15 \text{ pounds} = 66.67\%$ 

# **Section 3.6: Emission Statement – Segment Information**

#### INTRODUCTION

This form presents information about the "segments" (1) (the fuels, organic materials, or other raw materials used in the emission unit that can create air contaminants), and describes the emissions attributable to those materials. There is one form for EACH segment.

BNOTE: If your facility has completed a AQ CAA form, reporting the use of Hazardous Air Pollutants, some of these HAPS chemicals may be reported back to you in this print-out as the last point (a Dummy Point) with segments (chemicals). A subset of the HAPS has been identified by EPA as Priority Air Toxics (FR 38705 Vol 64 #137 − 07/19/1999). Any of these chemicals previously identified as used by your facility will be listed as segments on the last point on your side by side report. This is for DEP Reference Only. You do not need to make any changes to this segment. Priority Air Toxics chemicals will be updated automatically if changes occur on the BWP AP CAA form. Any changes to chemicals reported on your regular segments, should be changed appropriate.

DEP IDENTIFICATION CODES

**AQCR** 

Codes DEP uses to locate and identify the facility

DO NOT CHANGE.

PLANT The SSEIS Identification number DEP has assigned to your facility

**NAME** 

The name of the facility or plant that is reporting

The name must uniquely identify the facility. If the parent corporation operates more than one facility, the corporate name alone is insufficient.

The code for the federal air pollution control region in which your facility is located

**STACK** 

The number DEP's computer system (SSEIS) assigned to the "stack" (the vent or stack through

which emissions from this "segment" To reach the ambient air

**POINT** 

The number SSEIS assigned to the emission unit ("point") in which the raw material is used

SEG	SEGMENT NUMBER: The number SSEIS assigned to the particular fuel, formulation containing organic compounds or other raw material used in the emission unit  NOTE: If your facility added, eliminated or reconfigured "Segments" on your previous source registration, the ID number DEP assigned to each "segment" may have changed. However the name/Identification number you assigned to the emission unit will NOT have changed. The name/ID number you assigned can be found in the "COMMENT" field. How SEISS assigns numbers is explained in "Numbering System for Stacks, Points and Segments" in Appendix A: Definitions.
SCC ID	This is a code for the type of unit operation or production process in which the raw material is used. EPA's AP-42 ( <a href="http://www.epa.gov/ttn/chief">http://www.epa.gov/ttn/chief</a> ) contains the codes for each type of process as well as emission factors that can be used to calculate emissions from each unit process, in certain circumstances.
DESCRIPTION	Description of the raw material used, taken from the original BWP AQ AP-2 form
CAS NUMBER	FOR CHEMICAL COMPOUNDS: The number the Chemical Abstract Service has assigned the to the raw material  FOR MIXTURES: 000000 will be entered for all other substances.
CAS DESCRIPTION	FOR CHEMICAL COMPOUNDS: The chemical name

CAS DESCRIPTION	FOR CHEMICAL COMPOUNDS. The chemical name
	FOR MIXTURES: The name of the mixture

ANNUAL FUEL/PROCESS RATE	The annual throughput of the fuel or the material for the calendar year being reported	
UNITS	The units in which the annual throughput was measured (e.g., pounds, gallons, etc.)	

ASH CONTENT %	FOR FUEL ONLY: The percent of ash in the fuel, by weight

TIP: This information can be obtained from your fuel supplier.

#### **SULFUR CONTENT%**

FOR FUEL ONLY: The percent sulfur in the fuel, by weight

**TIP:** This information can be obtained from your fuel supplier.

# MAXIMUM DESIGN RATE

The maximum rate at which the material can be used in the emission unit (e.g., gallons per hour for coating or sq. ft. of material coated)

#### **COMMENTS**

The information that identifies the emission unit, identification number and a description of the substance being reported on this "segment", and also a note if your facility has an operating restriction applying to that segment/point

# POLLUTANTS CHART

Emissions of criteria pollutants (PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, PM2.5 and NH3) and, if applicable, other Clean Air Act Chemicals resulting from the use of the fuel, organic material, or other raw material covered by this segment form during the calendar year being reported

#### **Actual Emissions**

The actual emissions for the calendar year being reported, and the units of measurement Example Calculations can be found in APPENDIX C.

TIP: In many cases emission factors found in EPA's AP-42 (<a href="http://www.epa.gov/ttn/chief">http://www.epa.gov/ttn/chief</a>) can be used to calculate actual emissions.

The AP-42 emission factors are generic. Therefore they are NOT appropriate for facilities that are subject to certain BACT (Best Available Control Technology) requirements or RACT (Reasonably Available Control Technology) requirements such as NO<sub>X</sub> RACT for boilers. Facilities subject to RACT or BACT must use the emission factors determined through stack testing or the permitting process because AP-42 will overstate emissions.

# **Potential Emissions**

Potential emissions ① are the maximum allowable emissions under the terms of the applicable plan approval, or, if no plan approval is required, under the applicable regulations.

See the APPENDIX C for example calculations.

CAUTION: Pay CLOSE attention to the "potential emissions" calculations, because potential emissions help to define the regulatory requirements to which your facility is subject.

For example,

- ✓ For example, if your facility-wide potential emissions exceed the major source thresholds ② for any air contaminant including HAPs ③, you are required to obtain an air operating permit pursuant to 310 CMR 7 Appendix C, or to restrict your emissions through a federally enforceable permit (RES) pursuant to (310 CMR 7.02(12)). Contact your DEP regional office if you exceed a major source threshold and you have not filed an application for an air operating permit or a RES. The names and addresses of the Regional Offices are listed in Appendix F.
  - ✓ Similarly, if your potential emissions of Hazardous Air Pollutants ⊕ (HAPS) exceed the applicable Maximum Achievable Control Technology (MACT) standard threshold (for most standards this is a major source threshold) in 40 CFR Part 63 as of the substantive compliance date for that standard, EPA policy states that your facility would NOT be allowed to restrict your potential emissions below the applicable MACT threshold. Thus, according to EPA policy, unless your facility restricts its potential emissions to under the threshold BEFORE the substantive compliance date, your facility would be required to comply with the MACT standard. Furthermore, as a consequence of being subject to a MACT standard, your facility would also be required to obtain an air operating permit, pursuant to 310 CMR 7 Appendix C. The list of MACT standards and their substantive compliance dates can be found in Appendix E.

Other

Emissions of other Clean Air Act Chemicals (such as Hazardous Air Pollutants, lead, HYCs, HOCs, HCl, etc.) your facility is required to report

# CONTROL EQUIPMENT

Code for the type of air pollution control equipment used to control emissions from the use of this substance

The codes can be found in Appendix D.

This will be blank if no air pollution control equipment is in use.

# **EFFICIENCY**

The efficiency of the air pollution control equipment used to control this substance.

- For FUEL UTILIZATION EMISSION UNITS:
  - ✓ IF YOU HAVE STACK TESTING DATA ON CONTROL EFFICIENCY: Use that information.
  - ✓ IF YOU DO NOT HAVE STACK-TESTING DATA, use the *manufacturer's suggested* control efficiency. This is usually expressed as a range of percentages. Use the upper end of the range.
- For PROCESS EQUIPMENT EMISSION UNITS: Use the *Overall Efficiency*.

The Overall Efficiency is a function of the Control Efficiency and the Capture Efficiency.

The *Capture Efficiency* is the percentage of the emissions that reach the air pollution control unit.

The *Control Efficiency* is the percentage of the emissions that are removed from the air stream by the APCE.

- ✓ IF YOU HAVE STACK-TESTING DATA ON CONTROL EFFICIENCY: Use that information.
- ✓ IF YOU DO NOT HAVE STACK-TESTING DATA: Use the manufacturer's suggested control efficiency. This is usually expressed as a range of percentages (e.g., 90%-97%). Use the upper end of the range.

OVERALL EFFICIENCY = ("CAPTURE EFFICIENCY") X ("CONTROL EFFICIENCY")

#### **COMMENTS**

The information that identifies the emission unit, identification number and a description of the substance being reported on this segment, and also a note if your facility has an operating restriction applying to that segment/point